AMERICAN AGRICULTURIST.

Designed to improve all Classes interested in Soil Culture.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON.

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WORK FOR THE MONTH.

"Thus in some deep retirement would I pass
The Winter glooms, with friends of pliant soul
Or blithe, or solemn, as the theme inspired;
With them would search, if Nature's boundless frame
Was called, late rising from the void of night,
Or sprung Eternal from the Eternal Mind;"
Its life, its laws, its progress, and its end.

"Dead as December," is a proverb of rural life. The change is apparent everywhere. The sun has retired far to the South, and even at mid-day sends down his beams aslant upon the earth. "How short the days are," is the frequent exclamation from the busy housewife, and the sentiment is often echoed from her busy spouse. The weather is drear and gloomy, and the bright sunny days are few and far between. Outdoor labors are uncomfortable, and the shelter of the barn or the fire-side is frequently sought. It is a time of endurance, and almost the whole labor of the farmer is directed to make his family and the animals dependant upon him comfortable. There is little to attract him to the field or forest but the stern necessities of the season.

Yet, there can be little doubt that a much larger part of the Winter is redeemed for useful labor now than fifty years ago. Then, as the old people tell us, very little was accomplished after the Winter had fairly set in. Nearly all the help upon the farm was dismissed in November, and the farmer did little else than take care of his cattle until the Spring opened.

Now many of our farmers find it practicable to retain a large part of their Summer laborers, and to give them a chance to earn their bread in Winter. All good farmers now secure their wood, when the swamps are frozen and covered with snow. Places in the forest inaccessible at other seasons, are now visited, and the corded wood is hauled home upon the sled. Muck beds are so drained that they are accessible in Winter. It is practicable to throw out the muck in the coldest weather, and to sled it to the yards for mixing with manure, or to the fields, where it will be wanted in the Spring. It is found quite practicable, too, to ditch and drain at this season. Thick India-rubber boots make the feet proof against water, and a laborer can now be comfortable, even in freezing weather. Trenches are also dug and filled with cobbles as a foundation for stone fences. Manures in the yard are forked over and mixed with muck. There are many more things to be done upon the farm now than formerly, and the farmer has a more buoyant heart to do it.

The character of our climate, and of our population, we think, have undergone a change for the better. The cleaning up of our forests, and especially the drainage of swamps and low lands, have tended to soften the asperity of our Winters. The temperance reformation has had a happy influence upon the morals of the people, and energies once wasted in the tap-room, are now spent in useful labor. The industry of the farmer meets with a better reward, and he is stimulated by the higher price offered for all his products to unwearied diligence in his calling. The standard of education is greatly improved among the people, and the farmers now upon the stage bring a much larger share of intelligence to their work than the generations that preceded them. Then, in the matter of special training and education for their work, the farmers of to-day are in advance of those of fifty years ago. There has been a steady and healthful increase in our agricultural literature for the last twenty years, and the State and County Societies, which now hold their Annual Fairs, are the creations of the agricultural Press. These Fairs, *when rightly conducted*, are one of the best means of education in the farmers' art that we enjoy. We are approaching slowly, but surely, to a systematic husbandry. Order will be introduced into all the departments of farming, and men will have accurate knowledge of the wants of every crop, and will not hesitate to spend the necessary money and labor to secure the best results. Some points are already settled, and many more are rapidly approaching a solution. Our best informed farmers do not hybernate like many of the wild animals. They assume that man is the lord of Nature, and can so plan his business as to labor to advantage all through the year. Of course

MENTAL CULTURE

will have its place in his plans, and Winter is the best time to lay in stores of knowledge for future use. Few farmers find time in the Summer for that reading and reflection which are essential to the best methods of husbandry. Not only does a man want to master the general principles of agriculture, and its kindred sciences, but he wishes to apply these principles to his own homestead. There is probably a considerable variety of soil in the hundred or more acres he owns, and he wants time to mature plans for the economical improvement of the whole. Even after one has studied the subject of drainage, he cannot tell at a glance how much of his farm will pay for drainage. The swamps and swales, of course, most need this improvement. It will take time and study to tell how much further up the slopes and hill-sides he may extend his drains with profit. Some of his soils need lime probably, and it is a question where it can be best applied, and how large an investment he can afford to make in this article.

With the markets he has to supply, some crops will pay a great deal better than others. In some localities he may devote his whole farm to one or two leading staples; in others, a varied system of cropping is the more profitable course. The questions that arise in the management of a farm are very numerous, and now is the time for a cultivator to give his attention to them, and determine upon the course that is best for him to pursue. The mind is cultivated and strengthened not only by reading, but by the discussion of these practical questions in husbandry. There is no mental growth without reflection.

THE WINTER SCHOOL

is, of course, the appropriate place for the children who are to be the next generation of farmers. Who does not remember with rapture his schoolboy days, his first introduction to that august personage, the teacher, and his early experiences under his rule?

"What pleasing sights does yonder group create,
Their childish sports, their contest and debate.
Man loves to see, as ripened wisdom grows,
Its fruits enrich the soil from whence it rose,
But who can view nor secret pleasure know
Life yet in bud, and manhood on the blow?
'Tis then that man's himself; no artful guise
Spreads o'er its young desire its treacherous dyes."

It is the forming period of life with them, and very much of their future success will depend upon their advantages in the Winter school. In many parts of the country the sessions of the school are confined to this season. Farmers are often tempted to keep their larger boys at home, to assist in the procuring of fuel, or in the care of stock. For a little present gain, the future good of the lad is sacrificed. This course is unworthy of any good father. The boys of the farm ought to have the full benefit of the district school, and extra advantages as they

grow older. A good education of the mind and heart is the richest inheritance a father can bequeath to his son.

THE POULTRY QUARTERS

should now be looked after. You perceive the reddening combs of your pullets, which indicate eggs early if they are kept comfortable. If left to shift for themselves under the old shed, or upon the apple tree, your hope of eggs will be nipped in the bud, if you have been so rash as to cherish it. Many farmers are resigned to a long eggless Winter because they will not take trouble to provide for the biddies. Fowls want a warm southern aspect, sheltered from the wind and snows, and must have it if you want eggs. A poultry-house ought to be a part of every farmer's establishment; but if you cannot have a separate building, finish off a part of the barn cellar, and put in a window at the south side, where the sun can look in upon them for a few hours in the day. Furnish this room with pure water, gravel, old mortar, oyster or clam shells, or bones, all broken up finely. Put a bed of loam or muck under the roosts, and see that it is mixed with the droppings once a week. Fowls suffer more from the neglect of their fœces, than from any other cause. It is entirely practicable to have fresh eggs all through the Winter, if you will give your pullets warmth, cleanliness, and the materials to work with. Meat is essential.

FATTENING PORK.

Many keep up their swine until New-Year's, thinking they can get a better price for their pork. It costs a great deal more to make pork at this season than in warm weather, and we doubt very much if it can be made to pay. But if done at all, it should be done in the best manner. The sty, for Winter feeding, should be a covered building, to keep the animals both dry and warm. The nests should have an abundance of clean straw, and the food should be cooked and fed to them when warm. Wood is much cheaper than corn meal, and the animal heat kept up by a tight sty and warm food, is so much saved in the meal bin.

EXAMINE THE ROOTS.

The carrots, beets, turnips, &c., stored last month, should be looked after now. Sometimes they heat, if in too large piles, and decay commences. They should be kept at a low temperature, and at the same time be guarded against frost. Potatoes at all affected with the rot should be assorted, and all defective ones removed. A little attention at this season will often save a large store of roots from decay.

PRUNING

may be attended to in the mild days of December. Grape vines, especially, should not be overlooked. We have found it much better to put the vines in order in the Fall than in the Spring. The wood has time to sear in the Winter winds, and the sap vessels are entirely closed.

WASHING AND SCRAPING

naturally follows the pruning. Many farmers are so busy that the orchard and fruit-yard are neglected in the Summer. Remove all dead bark and mosses with a scraper, and apply a coat of soft soap and water. This will kill scale bugs and other insects, and promote the health and beauty of the tree. A smooth skin is as comely in a fruit tree as in a cow.

THE APPLE BORER

will give signs of his work about the collar of the tree. Remove the earth two or three inches with a hoe, and look for the holes. Thrust in a wire and spit the occupant, or he will spit your apples next year. Apple and quince trees should be examined once a year for this destructive insect.

REMEMBER THE POOR

in these hard times. Farmers are now a favored class, and have more occasion to celebrate the close of the year with thanksgiving than any other. In the cities, financial calamities affect nearly all classes, and multitudes are thrown out of employment, and are driven to beggary. Many will seek the country in search of labor and food. It will be a great kindness to furnish them with occupation, food and shelter. In very many cases this can be done without great inconvenience. There are spells in the Winter when labor can be profitably employed, especially if offered at low rates. Cutting and hauling wood, digging and hauling muck, draining, making compost, digging out barn-cellars, repairing stone fences, are some of the things that can be done in the mild Winter days. Give willing hands a chance to work and earn at least their bread.

HOW TO KEEP SWEET POTATOES FOR SEED.

This favorite vegetable decays so quickly in our climate, in the open air, at this season, that many suppose it impossible to preserve it through the Winter. It is, however, quite common for those who cultivate them at the North, to preserve their own seed. The essential things to be secured are dryness, and a warm, even temperature. Some pack them in a box, or keg, in dry sand, i. e. sand dried artificially in an oven, or over the stove. They are then kept near the kitchen fire, where they will not freeze in the coldest weather.

We have packed them in dry wheat chaff and plaster, and kept them in a room over the kitchen. We have also packed them in dry coal ashes, and kept them in the cellar, in a room warmed by a common house furnace. Both methods succeeded pretty well. Some of the tubers rotted, but we had a great abundance for seed. To persons living near the city, it is quite as well to procure fresh seed from the market in the month of April. It is, however, often very desirable to keep a supply as above advised for Winter use.

What the Country is Saving.

One favorable omen in the present stringency of the times is the reduction of extravagant and useless expenditure. Merchants and traders generally complain of a falling off in business. People are economizing. The costly furniture, the new dresses, the delicacies in food and drink, projected for the present year are being greatly curtailed. Let us estimate the result. There are now, say 21½ millions of white inhabitants in the United States. Suppose that on the average the expenses of each of these persons be reduced one dime a day by diminishing expenses not absolutely necessary. The saving would amount to over fifteen million dollars in one week, or nearly eight-hundred millions in a single year—enough to build nearly all the railways on the continent—enough to build four-hundred-thousand school houses costing $2,000 each—enough to put *three* Bibles in the hands of every man woman, and child on the face of the globe!

CALENDAR OF OPERATIONS.

DECEMBER, 1857.

[We note down a summary of various operations, many of them very common ones, it is true, but a simple catalogue like this will often suggest a piece of work that would otherwise be forgotten. The Calendar is adapted to the latitudes of 39° to 45°. A little allowance must be made for each degree of latitude—earlier north—later south. This table will be made out anew every month, and adapted to the season of each year.

EXPLANATIONS.—The letters f. m. l., refer to *first*, *middle*, and *last* of the month.

Doubling the letters thus: ff., mm., or ll., gives emphasis to the particular period indicated.]

FARM.

During this first month of Winter, the farmer is certainly entitled to relax a little from those labors which have urged him on through the season of seed time, tillage and harvest, and having gathered in his stores, to enjoy a portion of that rest which the season seems fitted to give. During this leisure let him lay plans for the coming year, fix upon what crops to plant, what fields to drain and what lot of woodland to clear up, or wild land to reclaim. Let him get down the back numbers and volumes of the *Agriculturist*, and re-read those articles which a more busy season prevented his bestowing the necessary thought upon. But indoor reflections and plans are not the only objects of the farmer's thoughts and cares. From the pastures and fields the cattle, sheep and horses have been gathered to the barns and are now looking to his hand for their daily supplies. There are also the surplus products of the farm, a portion of which may very properly be marketed now. This is also a favorable time for cutting, drawing, preparing and storing the yearly supply of fuel. Towards the end of the month which closes the present year, every one should settle as many "running accounts" as possible and wisely resolve upon the cash. or pay-as-you-go system. rather than run up a grocery or other bill for nearly a year, trusting to pay off with the Fall crops. If you have not heretofore been in the habit of keeping an account with the farm, we advise to commence January 1st 1858, by taking a careful inventory of the farm, implements, stock and produce on hand and register the amount in a book for the purpose. A similar account taken one year from that time will give an idea of your success in farming. A more correct account would be shown by a Dr. and Cr., side for the farm, charging it with everything paid out on its account or labor expended upon it, and giving it credit for all productions sold from it. Any permanent improvements, such as erecting buildings, draining lands, planting an orchard, &c., are presumed to enhance the value of the farm to the extent of their cost. Accounts of these kinds will be useful statistics, showing one's position at the end of each year, and suggesting those operations or crops most profitable for the cultivator. But to turn to present cares we wil commence by inspecting those

Buildings which should have been put in Winter condition last month. Nail the loose boards, batten the crevices, arrange the stalls and mangers for stock. If there is not sufficient shelter for all the stock, build a hovel ff. after the pattern described on page 218 of the October number.

Cattle will require especial attention during this month. Flesh lost now will be difficult to gain before Spring. Warmth, food and water are the principal things to be observed with stock. Feed regularly, using the roots and corn, or corn-cob meal mixed with cut feed. With a barn full of stock, a root and straw cutter should be indispensible implements. Have the oxen shod so as to be servicable at all times, no matter how icy the ground is. They are frequently more handy in the woods than horses.

Cellars—Examine now, and give an extra banking of earth, tan or saw dust to exclude frosts.

Christmas—May it be a merry one to all, and a feast of fat things, in which the poor are not forgotten.

Cisterns for the barn may still be built ff. if no well or spring is near. The time and manure saved by having water in the yard at all times will soon pay for a cistern, and the falling rain from a good sized barn will furnish enough for a well stocked farm.

Corn in some localities is not all husked. Have a quantity hauled to the barn or shed previous to a storm for a rainy day's job.

Drains may be made in any open weather during the Winter, if the ground is not too wet. Read over the series of articles on draining as they appear from month-to month.

Fencing—Get materials from the woods and swamps and split a full supply of rails, and prepare posts against the busy season of next Spring.

Grain—Thresh ff. m. any remaining in stacks, saving the straw for feeding and bedding.

Hemp—Put out ff. any not yet spread for rotting. Take up the already rotted and shock it for the hemp breaker.

Hedges—Plant ff. at the South, and where the ground will admit of working.

Hogs—Complete fattening ff. those intended for killing. Keep their pens and yards well supplied with muck and other manurial agents and absorbents. Have an eye to the increase of stock and turn the male among your breeding sows ff. if early pigs are wanted. This is the principal butchering month among farmers.

Horses and Mules—With grain feed, give a portion of carrots, and see that their stalls are warm and well bedded at night.

Ice Houses—Fill with the first firm, thick ice which is usually the best of the season. Houses may still be built ff. after the plan described and illustrated in the last *Agriculturist*.

Leaves—Collect from orchards, road sides and forests as many as possible. Dry and store under cover a good supply, or all you can get, for Winter bedding and for hot beds in the Spring. A foot of them spread over the cow and hog yards will make an excellent addition to the manure heap.

Manures—Push the manufacture of these at this season. Use muck, loam, leaves and straw to absorb *all* the liquids of the yards and stables. Cart a large heap of muck from the swamp to the stables for Winter use. A free bedding of it under horses to absorb the urine, will make twice as much manure as would be saved where all the liquids were allowed to run to waste, with no absorbent.

Plowing during open weather may still be continued on clayey soils when sufficiently dry.

Poultry—Give warm quarters, plenty of food and drink, with gravel, lime and meat, and you may expect eggs in the Winter season. Clean roosts often, barreling the contents for guano.

Sheep—Provide racks for, and feed under cover during storms. Keep horned cattle and horses from them. Give turnips in part, instead of all dry feed. See that they are supplied with salt. If early lambs are wanted the buck may run with them ll.

Tools—Look over during the stormy days of this month and if any need repairing you can better afford the time now than when they are wanted for use at a busy season. Some of the new ones of domestic manufacture, such as harrows, ox yokes, bows, hoe, fork and ax handles, wood sleds, &c., may also be made. Store those not wanted in a dry situation under cover, until needed in the Spring.

Turnips—Harvest ff. any still in the ground. Look to pits and give additional covering and close the ventilators at night if there is danger of freezing.

Water Pipes—See that they are sufficiently protected from frost.

Winter Grain—Allow nothing to graze upon the fields during the present month.

Wood—Commence early to get up the Winter supply. At the North where abundance of snow falls it is better to cut and draw together as much as possible before the deep Winter snows fall. Early snows usually make the best sledding to draw it home upon. A year's supply should be brought to the house, cut and stored under cover some time during the Winter, the earlier the better.

ORCHARD AND NURSERY.

Little labor is required, in the orchard at this season, if there has been proper management heretofore. The nurseryman is now nearly through with his Fall sales which he has found unusually light, owing to the "tight times." It will hardly be economy to forego the setting of trees beyond the coming Spring. A few barrels of fine apples and Winter pears would now bring enough in this market to set out an orchard.

Borers should be looked after ff. if they were not destroyed last month. See directions on the preceding page.

Labels and Stakes—Prepare a full supply for Spring use in the nursery. See that those on standard trees are sufficiently firm to stand the Winter. They should be attached by copper wire which can be lengthened as the tree increases in size. Loosen any which are cutting into the bark.

Mice—Where snow covers the ground, it is well to trample it down after each fall, to form an icy mass which they will find it difficult to pass in attempting to gnaw trees above ground. If the ground is not frozen, bank up about each tree, removing the earth in the Spring.

Orchards of old Trees—Scrape the rough, loose bark from the trunks of old trees to dislodge any insects or their cocoons, which have harbored there.

Pruning on a moderate scale may be done now, especially at the South. We would not advise removing large limbs during cold weather.

Scions—Cut ff. m. for Spring grafting.

Seeds and Pits for Fall Planting.—If any of these are still out of ground, put them in at once according to directions previously given in this Calendar.

Shrubs—These may still be transplanted during open weather. Tender varieties will require some protection as referred to under "Flower Garden and Lawn."

Transplanting—Continue ff. during open weather. Never allow the roots to freeze during the operation.

KITCHEN AND FRUIT GARDEN.

Very little gardening can be done during this month at the North, but at the South the soil may be manured, plowed and laid out, and many of the early vegetables sown on warm, dry grounds. In this latitude, however, possibly some of the November work was omitted and needs early attention now.

Asparagus beds not covered last month should receive a coating of course manure ff. Spread the old stalks, and the vines of the garden over the manure, which will protect from frost and cause an early start in the Spring. New beds may still be made where the ground is open.

Bean Poles—Gather the old and procure now or during Winter, as many new ones as will be wanted another season, storing them away under cover, if possible. The cedar swamps are now accessible and poles may be cut with the Winter's wood.

Cabbages and Cauliflowers—If any are still in the gardens, put them in Winter quarters ff. as directed in the November number. Those in frames require air at all suitable times. See under Cold Frames.

Celery—Harvest ff. what still remains in the ground Directions for storing were given on page 262, November number.

Cold Frames—Air these at all suitable times. When the weather will not admit of removing the sash entirely, raise the upper portion or the back side a little. Pick off all decaying leaves before they taint the atmosphere. Upon the approach of severe weather, bank up with manure and cover with straw and mats to exclude the frost.

Compost and Manures—Now is the time to make and collect these. Keep every receptacle or manufactory at work by supplying the hogs, cattle, horses, sheep, poultry and privies with material to absorb the liquid and gasses. Too much muck can scarcely be used for these purposes. Decayed leaves also form an excellent ingredient in garden soils. Prepare materials for early hot beds.

Currants and Gooseberries—Prune ff. those neglected last month. If the ground will not admit of putting in cuttings now, bury them in sand in the cellar or cover with boards in the garden where snowbanks will lie upon them.

Fig Trees—Bury as raspberries.

Fruit on Shelves or in the Fruit room—Look over frequently, using that which commences to decay. A moderately cool, dry atmosphere is best to preserve fruit.

Fruit Borders—Cover with a mulch of coarse manure to protect from severe freezing and enrich the earth. An embankment about each tree will often prevent its being girdled by mice. Trees may be set ff. on warm soils, as long as they are not frozen.

Grapes—Lay tender varieties upon the ground ff. if not already done. A moderate covering of earth is best for Hamburgs and other house grapes which have been growing out doors. Make cuttings now as the vines are being pruned.

Hot Beds—Collect materials such as leaves, tan bark, &c., and have a quantity of stable manure in readiness. Prepare sash and frames that every thing may be in readiness in season. Make beds at the South, m. ll. for early gardening, guarding carefully against frost.

Parsneps—Dig as wanted, securing a few to bury in sand in the cellar before the ground freezes.

Pruning of Grapes and small fruits may appropriately be done ff. making cuttings from the trimmings.

Raspberries—Cover ff. any omitted last month. Canes may still be set out ff. unless the ground is frozen.

Rhubarb—A covering of stable manure will both enrich the bed and keep out frost so as to get an earlier start in the Spring.

Salsify—Treat as parsneps.

Seeds—Clean out any remaining in pods or capsules, and label for Spring use. Place them out of the reach of mice.

Spinach—Cover with straw or salt hay ff. that intended to stand through the Winter. Thin out previous to covering.

Strawberry Beds were probably covered as directed last month. If not, neglect them no longer.

Tools—Repair and make as you have leisure.

Turnips—Harvest and store ff. any still in the ground. Look to those covered pits and bank up as the weather demands, closing the ventilators at the top.

FLOWER GARDEN AND LAWN.

Plants in these grounds, require very little attention during this their resting season. If tender shrubs were not protected last month they should receive care ff. as recommended at page 287. Evergreens may require looking to and their loose branches tied up to prevent snow from breaking them down.

Where the land will admit of working, grading and laying out of new grounds can be done to advantage, especially if the Spring should prove wet. Put everything in neat order that there be as many attractions as possible even in Winter.

Auriculas, Anemones, Polyanthus, Ranunculus and Primroses—Cover with coarse manure, leaves or straw, to prevent sudden and severe freezing.

Biennial and perennial roots, unless covered with snow, will keep better, and start fresher for a covering of straw or coarse manure.

Bulbs—Plant ff. any which chance to be still out of ground. Full directions have already been given. See also the illustrations and remarks on page 290. Beds of these will be improved by protecting them as above.

Chrysanthemums—Cut away old flower stalks marking the desirable varieties you wish to propagate from. The roots may now be divided and reset where the grounds are in working condition.

Dahlias—Take up ff. any roots still in the ground. Lable, and pack away in *dry* earth or sand, in a moderately cool cellar free from dampness. Do not permit them to freeze.

Daisies, Carnations and Pinks—Protect as Auriculas, or they are liable to Winter-kill. Evergreen brush spread over them forms a good covering. A few may be taken to the green house for early blooming.

Dielytra Spectabilis—Divide roots ff. and reset where an increase of stock is desired.

Frames and Pits—Open to the air in all suitable weather, but guard against admitting frost.

Gladiolus—Treat as Dahlias.

Labels and Stakes—Now and next month is a good time to prepare a supply for Spring use. Those made of pine or cedar and painted white are the simplest, and answer a very good purpose.

Peonies—Divide and plant out ff old or new varieties. Fall planting will insure a better bloom next Spring than if planted at that time.

Roses may be set out ff—Separate layers made in the the Spring and part the roots to increase the number of choice kinds. Tender varieties may be laid down and covered with earth for Winter protection.

Shrubs—Plant the early blooming hardy varieties this Fall, if the season will permit. Protect tender varieties as directed on page 287.

Stakes, Dahlia Poles, &c.—Collect and house for another season.

Trees may still be planted in many localities.

GREEN AND HOT HOUSES.

The directions of last month apply to this. It is essential that a proper temperature be maintained, ventilating at suitable times.

THE APIARY.

BY M. QUINBY.

Everything should be in readiness, to put bees into their Winter quarters at the commencement of severe weather, but be sure that they have had the benefit of all the pleasant days of Autumn likely to occur, before removal from their Summer stand. Where there are fifty or more, it is economy to Winter in the house. The combined warmth generated by a large number of stocks in one room, makes the temperature at all times quite mild, and experience proves that the consumption of honey is much less, than when Wintered in the cold. Unless the room is very small and warm, independant of the bees, less than fifty stocks might be too cold. In all cases, let the room be perfectly dark—the holes in the top of the hive opened—and if not nervous at seeing things stand on their heads, it would be best to turn the hive bottom up on some little blocks an inch square—this will let the air circulate through the hive, and carry off the moisture which is often the cause of moldy combs.

To Winter bees in the open air, the situation should be a warm one, out of the prevailing cold wind as much as possible. Let the sun strike the hive part of the day at least. Notwithstanding the apparent loss of some bees on the snow, there is much less hazard in getting a stock through the Winter, than when continually shaded. It is very important that they be properly ventilated, and protected from the mice.

For ventilation, raise the hives containing the strongest families one fourth of an inch from the floor. If there are any holes in the side, or other place, large enough to admit mice, nail over some strips of wire cloth to keep them out, but leave just room for the bees to pass. Open the holes in the top of the hive, and let the moisture pass up into the chamber or cap.

Any empty boxes that have been on the hives, and those partially full, that are intended to be used another year, should be packed away in some dry place, and at the same time freeze thoroughly, to destroy all eggs of the moth that may be about them.

FINAL NOTES ON THE CHINESE SUGAR CANE.

We trust our readers will excuse us for devoting so much of the abbreviated space of this Index number to a subject which has been one of great interest to the country during the nearly closing year, and one in which we have taken so active a part. Hereafter this plant will take its place among other cultivated crops, and require but comparatively a limited degree of attention in these pages.

RESULTS OF EXPERIMENTS.

On pages 296-7, will be found a table prepared at no little expense of time and labor, showing at a glance the result of some *sixty* experiments upon the Sugar Cane, made in different States and with a variety of treatment, soils, climate, &c. Following the table are interesting and valuable condensed extracts from accompanying letters. These have been taken at random from a vast accumulation of reports that have literally loaded down our tables during the last few weeks*. We have not made any selection of the letters copied from, with reference to presenting a favorable or unfavorable view of the matter, but have taken them up just as they chanced to be laid away at the time of reception. We therefore think a careful perusal of the tabulated reports, and the remarks following will furnish a fair view of the general experience of the whole country, and of the present opinion of those who have devoted some attention to experimenting with the new plant.

A careful study of these reports will, we think, lead to the following conclusions:

1. The Chinese Sugar Cane will flourish well wherever Indian corn will grow; it endures cold better than corn, but will *not* ripen its seed, in a cold season like the past, further north than about the latitude of 40° to 41°.

2. Under favorable circumstances, and in good seasons, it may ripen its seed as far north as 43° to 44°. See report No. 53.

3. It promises to be superior to Indian corn for soiling (feeding green) in any locality where corn is now cultivated, and entirely aside from its value as a saccharine plant, it will be an acquisition to our forage crops.

4. It will produce good syrup from the immature canes, and this may be done in ordinary seasons as far north as 45°. and even in colder latitudes.

5. The *best* syrup is made from the ripe or nearly ripened canes.

6. Unlike the Southern Sugar Cane, its saccharine properties are not materially injured at once by a moderate frost.

7. The trials so far, do not show that sugar can be readily made, but limited experiments seem to indicate that this will yet be the case.

8. If it should finally be found impossible to make crystalized sugar, still an excellent syrup can be profitably extracted from its juices.

9. The most profitable results will be obtained where the culture and manufacture is carried on upon an extensive scale.

10. The manufacture of syrup is as easy and simple as ordinary maple sugar making.

11. Unless "sweetening" of all kinds shall be produced much more abundantly at the South, and sold at the North much cheaper than the average prices of the past year or two, the culture of the Chinese Sugar Cane will prove highly remunerative in the Middle and Northern States.

12. *In all localities remote from easy access to market, the Chinese Sugar Cane will furnish sweetening for ordinary purposes cheaper than it can be obtained from abroad. This is perhaps the most important feature connected with this plant. There are thousands of inland towns, especially at the West, and on the Pacific Coast, where, owing to expensive wagon transportation, sugar and molasses cost double or treble the sea-board prices. At all these points, the inhabitants can grow their sugar cane and make their own syrup, if not sugar, cheaper than they can import it from abroad.*

13. While seed may not be ripened in the northern tier of States and the Canadas, except in very favorable years, this point is of no practical importance, since the small amount required—not more than a quart or two to the acre—will render it an easy matter to get an annual supply from the Southern and South Middle States, where it will always mature.

14. The cultivation, both for feed and for syrup making, may be entirely similar to that of Indian Corn, though at the North earlier planting is desirable where canes are desired for syrup making. It will, however, often produce a fair crop on soil too sandy and too poor to give a paying crop of Indian corn.

Other conclusions may be suggested on studying the reports, and from further information and comparison of views among practical experimenters. For this, as for other crops, we shall endeavor to present, at the appropriate season, practical directions in regard to the best modes of culture, feeding, and syrup or sugar making.

THE NEXT SEASON.

We are constrained at this time to caution our readers against laying out plans for excessive planting next Summer. Better to wait another year even, before venturing too large a sum. The persons indicated in note 12, above, may well plan for a moderate crop next year. Others should study well the chances of profit over old staple crops. We have urged every farmer to grow corn for fodder, and think the Sugar Cane may be used for a similar purpose to still greater advantage.

A Word as to Seed.—Numerous inquiries addressed to us already, indicate an almost feverish anxiety to secure seed for next year. This is needless. There is probably enough in the country to meet all demands. There have been many thousands of acres planted this year, of which a large portion has matured. We shall be disappointed if there be not plenty of seed offered in the Spring at 15 to 30 cents per pound, if not at lower rates. It is yet too soon to form a correct estimate of the probable demand, or estimate exactly the amount to be offered for sale. We shall give it out quite freely in our next year's free Seed Distribution, to all subscribers wanting it in limited quantities.

A WORD FOR OURSELVES.

Many kind and well meaning friends, who have read and valued the *Agriculturist* for a dozen years or more, were, during last Winter, quite anxious lest this paper and its publisher should in some way get "mixed up" with the Chinese Sugar Cane, and in the end suffer thereby. At the same time, a few considerate (we would not say jealous) editors, tried to make a little sport of what they were pleased to style "Judd's Chinese Sugar Cane," with sundry winks and hints about Morus Multicaulus, Dioscorea, &c. Had we followed the advice offered quite freely, we should have wholly abstained from the distribution of the Sugar Cane Seed; but as there were no direct grounds for condemning it in advance, as we did the Dioscorea, &c., and as there was a general interest in the subject, and speculators were in the field taking advantage of the univeral desire to try a little of the seed, and especially as we had good reason to believe the plant might prove valuable, we engaged in the work of supplying all who should ask it with a free parcel of the seed. We distributed among our own subscribers over 25,000 separate parcels, and in this way the growing capabilities of the plant has been tried in every part of the country. Some of the results are given above and elsewhere.

The course constantly advised by us in reference to the Sugar Cane was the same we would take with regard to any new plant, viz.: to first experiment on a limited scale for a season or two. A few of our readers are already censuring us for intimidating them from cultivating the Sugar Cane to a large extent the past season. They now think they would have profited by doing so. But while this might have been the case, it might have been otherwise. We deem it better to always take the safe side. We prefer even to be considered a little "old fogyish," than to run headlong into every new enterprise brought forward, because one thing in ten *may* turn out well. We did everything to disseminate the seed of the Sugar Cane, and to instigate and promote wide spread experiments, while, at the same time, we cautioned our readers against investing anything that they could not abundantly afford to do at the risk of losing the time and money expended.

We confess to not a little gratification at the results obtained from the new Sugar Cane, and in the part we have had in its introduction. It is now settled that the plant will be worth untold millions to the country. Our future course in regard to each and every new plant will be what it has been in the past, and we trust our readers may always be able to rely upon the *Agriculturist* as a conservative, but at the same time a wide awake friend and adviser.

*Our correspondents who have contributed so largely of their experience will please accept our hearty thanks for their favors. We could not, however, possibly find room for even a passing notice of each letter received. The matter contained on pages 296 and 297 has alone required the examination and condensation of over a hundred pages of letter manuscript.

HOW ABOUT THAT "AFRICAN IMPHEE."

Such of our subscribers as read the Tribune—and some others, are aware of the excitement raised last Spring, respecting a wonderful new plant that was destined to far eclipse even the wonderful Chinese Sugar Cane itself—we refer of course to the "African Imphee." For a time there seemed to be the prospect of a lively competition between Sambo and John Chinaman, for the honor of sweetening the Universal Yankee Nation. We promptly investigated the matter at the time, and became satisfied that Sambo was no where—or to drop the slang, we found no reason for giving even a hearing in these columns to any claims put forth for the "Imphee." Impelled by a host of inquiries, we, however, gave on page 142 (June *Agriculturist*), a brief explanation of some "seed transactions" which, we have been indirectly informed, lost us some love, and some money in the way of advertising. At a later period we declined even noticing Mr. Olcott's work on Sugar Cane after its, appearance, mainly because of the prominence given to the "Imphee" in its pages.

None of us frigid Northern people were allowed to test even the smallest quantity of the seed of the new plant, though two or three of us did succeed in getting enough of it from France to experiment with, in a private way—the experiment is still going on, as the plants, though especially recommended for rapid growth, and early matur-

ity, entirely failed to get ahead of Jack Frost, and we have left them in the field to "sprout" again next year if they will.

The whole importation of African Imphee was carried south and planted on something over a hundred acres. Ex.-Governor Hammond of South Carolina, and Richard Peters Esq., of Atlanta, Ga., with commendable public spirit undertook the labor and expense of testing the claims of the new plant. We may add that, while we were glad to have thorough experiments made under the anspices of our intelligent friends, we had our fears awakened as to the result with them, and so we stated to Mr. Peters, and others, during the Summer.

Several curious reports respecting these experiments having recently reached us indirectly, we wrote to Mr. Peters, requesting a statement for publication. His reply we give below, adding, that we think Mr. Wray, as well as Mr. Vilmorin, must have been themselves in some way deceived in regard to the worth of the Imphee, and especially as to the quality of the seed. Mr. Wray, certainly could not have hoped to have made anything among intelligent Yankees by monopolizing the sale of a hybrid seed. It is due to Mr. Vilmorin's reputation, as a careful and reliable seedsman, that he should make some explanation of the matter complained of below.

Further, while on this topic, we would inquire what has become of Mr. Wray's Patented process for making *sugar* from both Sorghum and Imphee? We have not heard of its successful application during the present season.

LETTER FROM RICHARD PETERS, ESQ., ON "IMPHEE" AND SORGHUM.

ATLANTA, GA., Nov. 14, 1857.

ORANGE JUDD, ESQ., *Dear Sir:*

I have not a word to write in favor of the "Wray Imphee;" it together with that received from Mons. Vilmorin, of Paris, proved to be mixed with "Dourah Corn," and other trash of the Millet tribe, and I can not for the life of me understand their object in introducing such a mass of worthless varieties of the Millet.

There may be some of the kinds that will prove of some value, but I am not prepared to say from the trial of this season, with 36 acres planted, that any one sort will be equal in every respect to the sorgho as a syrup making plant.

I have made between 3,000 and 4,000 gallons of very superior syrup from my crop of sorgho, and have sold it by the barrel at 50 to 75 cents per gallon.

I have not made trial of the sorgho syrup in the way of graining for sugar, for my cane juice this season was of an inferior quality as compared with other crops, caused by much of the cane having fallen down by too close planting on rich land, during a wet season.

You may rely on the sorgho being all that has been said in its favor as a syrup making plant, but for sugar, I as yet have strong doubts of its being made from it in quantity at a paying figure.

I have been shown some samples accidentally granulated, that prove its being convertible into true cane sugar, under peculiar or accidental circumstances, such as the quality of the juice, and the boiling being just as it ought to be.

Respectfully Yours,

R. PETERS.

THE SEASON IN ENGLAND—THREE CROPS OF CLOVER IN ONE SEASON.—The "Mark Lane Express," of London, under date of Sept. 26th, says: This very day we know of the *third* cut of clover having been secured, which must be considered as a rare occurrence in this country, showing one of the most favorable seasons witnessed for a great number of years.

THE TERRIER DOG.

Last month, in our "Farm Surroundings," we noticed the Terrier. We now give a drawing of one of the varieties, but not the "black and tan," which we then described. This is a *wire*, or rough haired "bull" terrier—a fierce pragmatical little fellow—full of energy and spunk, a determined enemy to all vermin, but rather crusty in temper, and not so companionable in disposition as the true "black and tan." In this cut the dog is cropped, both in ears and tail. It gives him a pert, saucy look, we admit, but such cropping injures his work. It is practiced almost unanimously with stable-boys, and in livery establishments, where they are most frequently kept, and partially so for fighting purposes—a barbarous practice—in which the vagabond propensities of their owners too frequently indulge, and to which the pugnacious nature of the bull-terrier invites them. And this is one objection we have to that variety. We dislike a bull-dog, any way. We have always associated them with barbarity, rowdyism, and vice of the worst description. One of the most brutal characters Dickens ever drew in the most degraded hunts of London—Sykes, was in companionship with a ferocious bull-dog, who partook of every beastly sin of his owner, with scarce a redeeming virtue. Yet, perhaps the dog was the better of the two. We would have nothing of the kind about us. Still, if indispensible for the purposes of guarding the premises, that anything of the kind be kept, he should be confined at all hours that honest people are about, and his only service should be that of watching within the gates and enclosures.

Burglars, however, have a way of appeasing even the most ferocious of dogs—particularly the large ones. It is one of the tricks, as well as one of the secrets of their trade, of which they have many; and the consequence is that large dogs are oftentimes not so safe in their watching as the small terrier, which is quite as wakeful and more difficult to circumvent. Taken altogether, therefore we prefer the small terrier to any other.

"The "Skye," is another variety, a nice, little, long, soft haired terrier, quite equal in his ratting faculties to the black-and-tan. His name is taken from the Isle of Skye on the Western Coast of Scotland, where he probably originated. His temper is pleasant, and perhaps as mild, and agreeable as the other, with equal Sagacity and worth. Yet his long hair renders him less cleanly. With many they are great favorites, and as finely bred and cared for. Such as these are the only dogs we would ever keep, as we consider the common run of cur and game dogs abounding about the country as no better than so many common nuisances among the farmers, slaughtering their sheep, and committing all sorts of depredations with scarcely a compensatory advantage.

NOTES ON ILLINOIS FARMING.

NUMBER II.

Two Classes of Settlers—Fences, Value, Kind and Cost—Hedges.

To the Editor of the American Agriculturist:

In my former communication, the ease with which the prairie lands are brought into cultivation was shown. Thousands of acres are annually broken up and new farms opened. Of the whole number thus commenced, the owners of about *one-half* remain on these *new* places as permanent residents. The other half consists of a nomadic class, that is wandering beings, never satisfied in any one place. They either enter Government land, or buy from some railroad or other company at a moderate price, commence farming operations by putting up a *shanty* and a few rods of fence, and breaking from ten to forty acres of land. They raise a sod crop of corn, and sometimes a wheat crop, then a fit of restlessness takes possession of them, and thinking they are making money when they are able to get $5 per acre more for their land than what they gave for it, they sell out, and make a new purchase either in the same State or farther West. These characters are of no real benefit to a community, as they never make any permanent improvements, nor study to advance the general interest of the neighborhood in which they live.

Another class of people take the place of these first, men who are industrious, go-ahead fellows, working the rich land as they worked the more exhausted farms they used to occupy in the older States. They make permanent improvements in culture, stock and buildings, of which the most prominent is

FENCING.

Of this there are three kinds most general, viz.; worm-rail fence, post and board fence, and hedges. There are also post and rail, and wire fencing. Vicinity to timber reduces the cost of fencing somewhat, as does vicinity to railroads. Timber being estimated at various prices and labor ranging from $12 to $20 per month, the cost of post and rail, and worm fence differ a little, governed as above. This station, Tacusa, Christian Co., is on the Illinois Central R. R., nine miles north from Pana, where it is crossed by the Terre Haute and Alton Railroad, and thirty south from Decatur, the crossing of the Great Western Railroad. Here posts can be procured, delivered at 8½ cents apiece, freight included. They are mostly white oak posts. Green oak lumber as it runs from the mill, is delivered here at $17 per 1,000 feet, including freight; better qualities of oak, at $18 to $20. Much poplar lumber is sawed in Indiana, and shipped per railroad to Illinois at prices ranging from $16 to $25, per 1,000 feet.

Labor as before stated is variously estimated, less in Fall and Winter, than in Spring and Summer, the former seasons being the time in which fencing is usually done.

The posts are set in holes made by a post auger, or they are pointed and driven in, in wet weather, or immediately after wet weather. The posts are held by one man, while another stands in the wagon, which goes along the line with the posts, and drives them with a heavy maul. Many posts are set in this way.

Fencing plank is sawed 14 feet long and six inches wide. A lawful fence has five planks. Many are made on new prairie farms where hogs or sheep are not permitted to run at large, with but two or three planks, that number being sufficient to turn horses and cattle. The nails used are called fencing nails, being short, thick 8ts. The quantity of fencing put up in a day is governed by industry and activity.

A certain tact possessed by most American farmers, is necessary in making all such improvements, and the farmer must be *au fait*, that is, understand and *be able to do* any kind of work. Without being egotistical, I will merely remark, I hauled nearly all my own lumber from the Station, assisted in the carpenter's work of my house, helped to lath it, built the chimneys myself, and built my own dairy and barn, assisted by one farm hand. For a "*lazy Southerner*," this is something to talk of at least. [Dr. H. will succeed as a farmer—make a note of that.—ED.]

Fences are to a prairie farm one third its value, and it will sell at a price very much greater in proportion than one not fenced.

HEDGES

are made in two ways; by planting seedlings, young plants of from one to two years growth; or by sowing the seed where the hedge is intended to be, and thinning out when up. Either plan will make a good hedge if *properly attended* to.

The hedge row should be well plowed and harrowed, and in mellow condition, before seeding or planting. Plants should be healthy and vigorous. A furrow, straight, clean, and about six or eight inches deep, should be run where the hedge is to be; the plants dibbled in six inches apart, and loose dirt hoed up to them, leaving them regular and clean. The first year they should be cut down twice, the first time within six inches—the next time within nine inches of the ground. The second year requires another shortening to a foot, after which they may be allowed to grow higher, having now well spread. They will, in the third year, be nearly or quite four feet high *when trimmed*, and many hedges may then be "turned out." I have referred to the Osage Orange, (*Bois d'arc*,) plant, in speaking of hedges, which, when attended to as every such thing *should be*, makes, *in this latitude*, (39½°,) a permanent, impassable barrier to biped or quadruped. Let those who doubt come and see.

American Hawthorn will make an excellent hedge, but the Osage Orange is quicker, and, I think, better for the purpose.

Wire fencing has as yet been but little resorted to on the prairies. The posts require to be close together, and the wires stout and well stretched. We have some in this neighborhood. At a future period I may be able to give you an account of its *standing;* at present it is just *suspended*.

H. H.

Tacusa, Christian Co., Illinois, Nov. 16, 1857.

WHY KEEP POTATOES IN THE DARK.

It is often observed by good housekeepers that their best potatoes come from the bottom of the bin or barrel, where they are the most effectually guarded from the light, and often covered with the soil that has sifted down from the upper layers. It is often recommended that this vegetable be kept in a dark cellar. It has been suggested that one reason of the deterioration of this vegetable is owing, in part, to the fact, that cellars in all the modern built houses are made much more light and airy, than they were thirty years ago.

The potato is in its most perfect condition when it is fully ripe, and has the largest share of starch in its composition. If it could be kept in the ground, without freezing so as to destroy its vitality, it would remain nearly unchanged in its character until the following Spring, when the increased warmth of the sun would excite the germs. Art should attempt to do what nature does perfectly, in the original home of the potato. It is kept in a cool, dark deposit of vegetable mold until the Spring opens. In the good old-fashioned cellar which kept potatoes, when we were a boy, these conditions were very well observed. The bin was in the darkest, coolest part of the cellar, and the potatoes were deposited there with the dirt on them, as they came from the field, and they saw no ray of light, except that of a candle, from November until March. They were only kept from from freezing, in the zero nights, by a thick covering of rye straw.

In the modern built house there is usually too much light and warmth in the cellar. The potatoes come in early Winter into the light and temperature of April. The reproductive instincts of the tuber are excited, the eyes begin to start, and the starch, which makes the potato so mealy and nice, as an article of food, begins to pass over into other compounds, favorable to the growth of a new crop. The cook complains of wet heavy potatoes. These prematurely sprouted tubers, it is frequently observed are not so productive as others. The reproductive energy seems to be weakened by this untimely light and heat. It looks reasonable that this course followed up for a long series of years, should have an unfavorable influence upon the health of the plant. Market gardeners are alive to this fact, and let their early potatoes, ripe in July, lie in the ground until November before they dig them. They are then kept in a cool, dark cellar, until it is time to start them for planting.

THE TIMES GROWING BETTER.

We are most happy to be able to say, in this last-written item of the year, that the "times" are really growing better. In one sense, this city is the great commercial heart of the whole country, and here matters never looked more hopeful than now. Gold and silver, the *real* currency, next to farm products, so to speak, were never more abundant than at present. The Banks of this city alone hold in their vaults, to-day, nearly $30,000,000 of specie, almost double the amount ever there before. The feeling here will gradually diffuse itself over the whole country. But, though gold is plenty, business is done more upon a "specie basis"—that is, the saleable value of all articles of commerce is estimated more by the comparative amount of gold and silver in the country, than upon the false basis of the amount of paper issues in circulation, as has been the case for a few years past.

It will take a long time, however, for the country to entirely recover from the financial blow received in October, but the improvement has certainly commenced, and will go on. The prices of various farm products will scarcely return to their wonted figures in some years at least, and it is useless to hold on to them with any such hope, but they will remain no lower, comparatively, than other articles for which we wish to exchange them. A bushel of wheat cannot be exchanged for *so much* gold as formerly, but it will buy as many articles of comfort, convenience and luxury. There is already, say in this city, as great a decline in the prices of sugars, teas, coffee, clothes, furniture, &c., as there is in the prices of grain and meat in the country.

There are, of course, exceptions to this general rule. For example, owing to the failure of a large proportion of the paper mills, there is but a small supply made, and we are actually now paying more for the white paper we print upon, than before the recent financial troubles. But this cannot continue. Capital will be turned into this channel, and paper, like everything else, must sooner or later come down to the changed order of things, viz.: the higher value of gold and silver, and the consequent lower scale of prices for everything else.

Let no cultivator of the soil fall into the fatal error of inactivity, because the *nominal* value of produce is declining. People must always eat and wear clothes, and he who raises breadstuffs, meat, wool, &c., &c., will be sure to find a market therefor.

Let us, then, take hold with a will, and begin to lay out large plans for next year. We may not get all we desire or expect, but if we would hit the moon let us aim at the sun. It is our pleasing task to endeavor to set before our readers the best modes of increasing, to the highest point, the products of the agricultural labor of the country, and we shall certainly aim at the sun. We now lay down the pen for 1857, to take it up at once for 1858, with renewed energy and hope.

"COLUMBIAN GUANO;"

When this article was first offered for sale in this city we carefully examined a sample of it, and pronounced it of little or no value. To a private offer of a quantity of it for our own use, at a very low rate, we replied that "we would not cart it home for it." This opinion was based upon its being entirely devoid of animal or vegetable matter. Several advertisements of the so-called 'Columbian Guano' have been offered for insertion in the *Agriculturist*, but since the examination above referred to, we have refused to insert them at any price. During September we were informed by a subscriber that he had purchased and applied a quantity of this material, under assurances amounting to a guarantee, of its superior value as a fertilizer, and that having tried it, and receiving no benefit, he had refused to pay for it, and had been sued by the seller. We therefore inserted the inquiry at page 227, October number, to call out information from those having experience with it. The following is one of the replies received.—ED.

To the Editor of the American Agriculturist:

In compliance with your request, I submit a statement of my experience of that humbug, sold under the name of 'Columbian Guano.' In August, 1856, I purchased a ton of it, in Philadelphia, and applied part of it on a field put out with wheat. It was put on broadcast with my own hands, and with much care, at the rate of about 400 pounds per acre, on freshly and deeply-plowed ground. It was covered with a good harrow, and the wheat planted with a drill. I left a patch large enough to see the difference, without the ground rock of the Columbian Islands (it is nothing but such), and there was not the least difference where it was applied and where not. In order to give it a fair, impartial, and full trial, I applied the balance (excepting one bag I still have in my barn) on the poorest ground I own, with oats, and put in precisely the same as with the wheat. The result was similar; that part of the field which had no Columbian ground rock applied was fully equal to the part where it was carefully scattered at the rate of about 400 pounds per arce. Had I shovelled up a ton of dirt from the turnpike, I would have had, unquestionably, a much better result; for in that some animal droppings would be brought on the ground, of which the Columbian humbug is destitute. The trash, freight, &c., thereon, left me minus $45, without a cent's worth of benefit. This is my experience, and I give it without fear, notwithstanding the attempted intimidations from the dealers.

J. S. KELLER.

Schuylkill Co., Pa., Oct. 30., 1857.

KEEP THE STABLE FLOORS CLEAN.

We know divers people who take some pride in their horses and cattle, but who are inveterate slovens in their stables. Their racks, or mangers are so made that half the hay they give their stock is wasted and drawn under their feet. They don't clean their stables once a week, or a fortnight. We have, indeed, seen stables where valuable animals were kept, not cleaned out for an entire Winter, and the heels of the poor beasts stood a foot higher than their fore feet in the latter part of the season. We once hired a barn—a nice, newly built barn, too—of a man for the Winter; and when we went to put our stock into it, found that the horse stable sill was more than two feet above the ground, and the poor beasts had to leap that high to get into it, and fall down or make a leap every time they went out of it; and also, that full eighteen inches of solid horse dung had to be thrown out, taking a man half a day to do it before we could use it, besides repairing the entrance by a bridge that they could walk in and out upon. We scolded the owner soundly for his laziness—it was nothing else—and he only answered that "he hadn't time to clean it, and didn't see what harm it did the horses!" And yet, when we came to settle with him in the Spring, he wanted us to pay some dollars extra because we used a part of his barn floor to mix our cut feed upon, on the plea that in wetting our feed for mixing, it rotted his floor *during the Winter!* His half a dozen loads of horse dung seething, and fermenting through a long hot Summer, didn't rot the stable floor! Oh, no. Just so *some* folks are constituted.

A stable where stock is kept, should be cleaned out once a day, at least, and twice is none too much. In all our stable practice we clean the stables twice a day, and shake up the bedding, let the weather be as it will. On the floors of our calf and sheep stables we scatter dry litter. When that gets thoroughly soiled and saturated, we clean it out and supply its place with fresh. The ammonia arising from the *stale* of stock in the stables becomes, in a short time, very offensive to them, as it is to ourselves. It penetrates their lungs and gives them disease. Its pungency affects their eyes, making them sore and irritable, and is a positive injury, to say nothing about the slovenness of leaving the stables unclean. Cleanliness, indeed, is as necessary to beast as to man. No creature can thrive when fouled and besmeared with ordure.

When horses (not mares) and oxen stand regularly, holes should be bored through the floor to let their stale run through on to muck below, or into a trench by which it may pass off and be saved. Otherwise, it remains under them to make them uncomfortable when they lie down, unless they have bedding enough to fully absorb it, which is not always convenient. Our own plan of stable flooring is to raise that part on which the animals stand two inches—the thickness of the plank—above the passage behind, and sloping from the foot of the manger back, to give a fall of one to two inches in the distance of six or seven feet of floor on which they stand, to admit the stale to pass off readily, as well as to let the droppings on to the lower level behind them.

Best Things to Give.—The best thing to give to your enemy is forgiveness; to your opponent, tolerance; to a friend, your heart; to your child, a good example; to a father, deference; to your mother, conduct that will make her proud of you; to yourself, respect; to all men, charity.

WINTERING CALVES.

Calves should have loose stables, or stalls, to run in during the Winter, with a little yard or paddock for exercise out of doors in fair weather, and plenty of air always. Good soft hay, a few oats, say a pint a day for each, or an equal quantity of corn, oats, or barley meal, and in mild weather a quart of sliced roots is their best food. In very cold weather, roots do calves—such is our experience—more hurt than good. They are cold and watery, and scour them. In mild weather, roots supply the place of *green* food, and we consider them good for that only, in our Northern climate.

If calves get lousy, rub a little *soft* grease, mixed with a sprinkling of Scotch snuff, on the affected parts, thoroughly to the skin, and the lice will leave at once. If you have not the snuff, grease alone will do. This is effectual, and the only remedy we have applied for years. Tobacco water we do not like. It often sickens the calves, and is not so certain a cure as the grease. Keep the calves warm, dry and clean, and they will come out in the Spring as bright as larks.

WINTERING LAMBS.

The same food and treatment applied to calves will succeed equally with lambs. If they get ticks upon them, Scotch snuff distributed along the back, by opening the wool and rubbing it well in, will destroy the ticks. Do not crowd too many lambs together, and separate the strong from the weak All animals are selfish, and have no sympathy for their inferiors. The larger, of whatever kind, will overrun the smaller, drive them from their food, and starve them out altogether.

Old, or weakly sheep, may be wintered in the same stables or sheds with lambs; for, if the old sheep be larger and stronger, the lambs are spryer, and can better dodge about them for their food. They all require fresh air, and plenty of it. *Dry* cold never hurts a sheep, but rains in Winter are frequently injurious, particularly if of open-wooled varieties, as they soak to the skin and give them severe colds. A severe snow storm, if dry, is less hurtful than a warm rain, and a sleet is worse than both together.

WINTERING COLTS.

A snug shed, or stable, is best for Wintering colts, provided they be halter-broke, which they should be before Winter sets in. They will eat all sorts of coarse food, but should have a little grain or meal, say a pint to a quart a day, according to their size and age. They should, if convenient, run out a part of the day. They love to forage on a cattle dung heap, and pick out the waste litter. Let them have all they want of it, as it is a healthy variety for them. A dry pasture, when snow is off the ground, is a good change for them also. We have Wintered many colts in our farming, and found that nothing got through the season easier than they. Their hair gets long and sometimes rough. No matter, there is a close fur under it, and it keeps them dry and warm, and they are all the better in the Spring. Enough to eat, with good shelter, is all they want to keep them healthy and growing. But they should not run out with the cattle, as they are liable to get hooked, while they, in turn, drive the cattle from their food. Every one to his own kind in the farm-yard, as in other appropriate places.

HOW TO GET UP A FARMERS' CLUB.

A farmers' Club, or Agricultural Society, in any neighborhood, is a good thing. We have seen abundant evidence of their utility—their profit. We venture to say that any thickly settled neighborhood, so fortunate or so wise as to get up and keep up a spirited Farmers' Club for two or three years, will add at least *ten per cent.* to the aggregate production of the farms. This is a large statement, but it is not an unfounded one.

We can, perhaps, best illustrate the advantages of such an association by describing how to form one, and to do this we will give the history of one organized in Ohio, two years ago. As our information is from a private letter, without liberty of publication, we will substitute assumed names for the real ones.

Mr. Williams having read much of Farmers' Clubs, elsewhere, proposed to Mr. Johnson that they should try what they could do in their own neighborhood. They talked the matter over with Mr. Smith, Mr. Clark, Mr. Hudson, Mr. Morris, and two or three others, and before much stir was made, or any opposition created, the scholars were startled by the following announcement, read by the teacher, at the close of the school on Saturday:

"Special Notice.—There will be a general meeting of farmers in this room, at half-past seven o'clock next Tuesday evening, to attend to some important business of interest to all."

The teacher remarked that he did not know the author of the notice, but that he was assured by a private note that the meeting was to be an important one. The scholars carried home the report, and it soon became noised abroad through the whole neighborhood. The authors of the affair seemed to be quite as ignorant as any one of the whole matter, but they took care to talk a good deal about the Notice, and to make as many inquiries about it as possible, and advise everybody to be on hand.

Well, on Tuesday almost everybody came over to the brilliantly lighted school-house, to see what was going on. When the room was pretty well filled, Mr. Johnson rose and moved that Esquire Saunders should be Chairman, which was carried unanimously. Esq. S. took the Chair, thanked the audience for the honor, and requested that some gentleman would state the object of the meeting; as for his part he had dropped in out of curiosity, and did not know what they had come together for. Mr. Clark rose and stated that a few farmers had been talking over the matter, and they had come to the conclusion that it would be a fine thing for the farmers of the neighborhood to meet together and have a friendly talk about things that pertained to their mutual interests. They had often met to discuss politics and other topics, and no doubt each one had carried home some new ideas. Now he did not see why they could not just as well talk about feeding ani-

mals, manuring land, what crops paid best, what implements were best, the best mode of making butter, &c. Mr. Williams, Mr. Smith, and Mr. Hudson, offered similar remarks. Mr. Smith said it was well known that Mr. Seymour got the best crops in the neighborhood, and had the best animals, and he did not see why they could not draw out of him some of the particulars of his mode of farming which would benefit all the others. He therefore proposed that they should form a Farmers' Club on the spot, and hold weekly meetings to talk over matters of this kind. They could try it at least. Without waiting for any opposition, it was moved and carried to form a FARMERS' CLUB. With no delay, Mr. Williams stated that he had prepared a draft for a CONSTITUTION, which he would proceed to read:

ARTICLE 1. This Association shall be called the Farmers' Club of District No. 7, of Clinton Township. Its object shall be to promote improvement in the modes of Agriculture pursued by its members, by such means as shall seem most feasible to the members, to be directed by them from time to time.

ART. 2. Any person over 12 years of age may become a member by giving his name to the Secretary and paying the sum of 10 cents.

ART. 3. The Officers shall be chosen by a vote of the majority of members present at the first meeting in each month, and shall consist of: a President, to preside at all meetings during the month, keep order, &c.; a Secretary, to enrol the names, keep records of the proceedings, issue notices of meetings, &c.; a Treasurer, to collect and take care of the funds, and expend them as directed by vote of the Society.

ART. 4. The exercises at the meetings shall consist of discussions, or familiar talks upon some agricultural topic, or topics chosen for the evening.

Mr. W. stated that he had drawn up these articles in the simplest form possible, and he thought they were all that were necessary for organization. They did not want a long list of rules, regulations, by-laws, &c., to wrangle about. If anything more was needed it could be added when desirable.

The adoption of the above Constitution was moved and carried; officers were immediately nominated and appointed, twenty-three names were given in to the Secretary, and in less than forty minutes from the first calling of the meeting to order, the Club was fully organized, and the whole thing under way.

Mr. Morris immediately rose and stated that he had a large quantity of manure in his yard, and was very much in doubt whether he should cart it out now upon the fields, or leave it in the yards until Spring. He would like to know what Mr. Rogers thought about the matter. Mr .Rogers was a successful farmer, who was dead set, in words at least, against "book-farming," and from him most opposition in the formation of a Club had been expected. But he gave his opinion very freely, in a familiar way, in answer to the question of Mr. Morris, and really communicated much useful information drawn from his experience. Mr. Morris asked several questions of him, and proposed several objections, and these were talked over by at least a dozen others. Indeed, the talk was so lively and interesting that the meeting held on to nearly ten o'clock, and the farmers then went home in companies of two, three and four, talking over this matter of manures. No vote was taken, and none was needed, but many were set to thinking, and at least some gained new ideas.

Before the meeting was dismissed, it was proposed that they should come together in one week and talk over the best time to cut timber for fencing and other purposes. At the appointed time, a large crowd came, and almost every one had something to say of his experience.

At this and succeeding meetings no strict formality was observed, but everything was done in a social, familiar manner, and the whole neighborhood, in time, became acquainted with the successful or unsuccessful experience of nearly every other person in the place, upon almost every department of farm labor. The farmers' wives and daughters soon took part in the meetings, and they are kept up to this day, with no diminution of interest. In Summer, they hold their meetings around, from farm to farm, and examine and talk about the modes of culture pursued by each one visited. We will here name some of the various topics discussed at the successive meetings of the society, as they are recorded in the Secretary's book:

QUESTIONS TALKED ABOUT.

Is lime good for our soils, and when and how to be applied? The same of plaster. The same of ashes. Shall we sell ashes for 10 cents a bushel, or use them on our land? Is Barley a profitable crop? Can we produce Honey profitably, and what are the causes of failure? Are Beets and Turnips worth raising in the field, what kinds are best, and when and how should they be cultivated? Does Buckwheat pay to raise for grain, and to plow under? What is the best form for a general farm Barn. How are calves best raised, with the cow or by hand? Are field Carrots worth our cultivating for feeding stock? Is Cheese or Butter-making most profitable, and the best modes of making each? What varieties of Corn are best for our soil and climate, and what is the best mode of culture. How shall we drain our wet lands in the cheapest and best manner? Are fowls profitable? What Hogs are best? What Fencing is cheapest? Does Fruit-raising pay, and what kinds of apples, &c., are best? Is a large garden profitable or not? When shall we sow Grass Seed, and what kinds are best here? Should Corn be "topped?" Best mode of treating Manures in the yard, &c? Plowing in Clover and other crops for manure. Has the Moon any influence on crops, sowing, &c.? Are Mowing Machines profitable, and what kind does best? Ox-yokes, Harness, &c. The best Plows, time and mode of Plowing. Does "Pork" making pay? The culture of Potatoes. Best season for Pruning Fruit Trees. Tobacco Culture. Are shade trees injurious to pastures? Will root crops pay? What culture, various modes, time of sowing, best soils for, &c., &c., (discussed at three meetings.)

These are some of the topics already discussed, or talked over, and a large list of subjects are yet untouched, such as selecting Seeds, Broom Corn culture, Birds and Insects, Clover Seed, Flax, Sweet Corn, Swamps, Muck, Gang Plows, Harrows, Cultivators, Hay Caps, Leaves, Saw-dust, Oats and other grains, Pumpkins, Strawberries, Sugar-Cane, &c., &c.

Now, who cannot see that the getting together of a company of practical men, from time to time, and the relation of their varied experiences, will result in mutual benefit? Said a farmer to us, once, "I never met even the poorest farmer and talked with him four minutes without getting some new idea, or being led into some new train of thought." We doubt not this is the case with every thinking man. How much more useful then to meet a dozen, or a score of men, engaged in a similar occupation, and listen to an acount of their experiences, &c.

Let us, then, have such agricultural gatherings all over the country. The *Agriculturist* goes into nearly fifteen thousand neighborhoods,—in some only a single copy, in others from six or ten, and from that up to forty, fifty, and a hundred copies, and we shall certainly feel that a good work is done if the above account should be the means of starting a Farmers' Club in one half or one-fourth of these neighborhoods.

KEYSTONE CIDER PRESS.

J. Holt, of Pittsburgh, Penn., writes: "I have read your article on the Cider Press. I have worked one, and I believe their good qualities are greatly exaggerated. I found it difficult, with my two boys, to make one barrel. What kind of barrels your correspondent uses I cannot tell, but if he means 36 gallon barrels, he would need to shovel in the hopper from 120 to 150 bushels, then grind them, then shovel them out of the box into the press, and then squeeze them. I think it is a thing impossible, even with horse power, but it would be well for you to make a calculation and let them judge for themselves."

REMARKS.—Mr. Holt has either made a large error in his figuring, or apples in his region must be very *dry affairs*. The correspondent referred to (see page 227) put the capacity of the Mill, worked by himself and two boys, at *five* barrels a day. We have found 8 bushels of good, or 9 to 10 bushels of poor apples, enough for a barrel of cider. Mr. Holt calculates upon 24 to 30 bushels of apples for a barrel of cider. We think it not a hard job for a man with two boys—if at all sizeable fellows—to grind and press 40 bushels a day, that is about as many as would fill a common two-horse wagon-box one and a half times.—ED.

HOG CHOLERA.

We have, as yet, been unable to respond to the anxious inquiries of many of our Western readers, respecting the causes, preventives, or cure of this fatal disease. The following report on the subject is from Dr. Jas. Higgins, of Baltimore, the State Agricultural Chemist of Maryland, which we give without being qualified by our own experience, or observation, to endorse or gainsay the conclusions, or practice recommended:

"The public attention has been for a long time directed to the existence of a fearful malady amongst hogs, under the above name. It has prevailed for more than a year in the large distilleries of the West and South, as well as in the small pens of country farmers in the East and North; it has committed serious ravages in the Southern and Middle States, and early in the Spring I was called on by the owner of a large distillery here to attend to his hogs, which were rapidly dying. I went at once to see them, and obtained for examination the blood of many of the hogs in perfect health, for the purpose of comparison with that of those in the act of dying.

These examinations, carefully made, revealed the fact of a high inflammatory condition of the system, as the subjoined analysis shows:

Healthy Hog Blood—Clot firm, not large, scarlet colored; solids, normal; fibrin as 2.33 per 1,000.

Diseased Hog Blood—Clot not firm but large, brown colored; solids less than in the healthy; fibrin as 5.60 per 1,000.

The blood in each case was taken from the arteries.

This condition of the blood evinced a high degree of inflammatory action, but did not show in what particular organ or organs, structure or structures, the inflammation was located. To discover this I made numerous *post mortem* examinations, and found, 1st: The brain, healthy; the heart, do.; the stomach, do.; bowels, including the greater or lesser intestines, do.; kidneys, do.; liver, do.; melt or spleen, do.; lungs intensely diseased; in the upper part they were engorged with dark, grumous, bruised-looking blood, and in the lower lobes the inflammation had proceeded to suffocation, being filled with purulent bloody matter, and entirely incapable of carrying on the process of breathing. The left lung was generally more affected than the right, and in every instance the inflammation had proceeded to a greater extent in the lower than in the upper parts of the lung—in some cases the peculiar structure of the lung could not be seen, so entirely had it become disorganized. In no cases were well-de-

fined abscesses found, nor was the windpipe inflamed but a short distance from the seat of the diseased lung.

Symptoms.—The first symptoms were a laziness on the part of the animal affected, some loss of appetite, a kind of husky grunt approaching to a cough, sometimes a slight purging of the bowels, and a yellowish colored urine; then the animal would become more weak and seem to be paralyzed in the small of the back, totter about for a short time, and finally lay down and die.

The treatment was divided into two parts—prophylactic (preventive) and curative. With a view to the first, the pens were scattered over with plaster of Paris and water-slacked lime, whilst at the same time, they and the troughs were washed with gas tar.

The curative treatment was the administration of soda-ash and barilla. There is some trouble in the solution of barilla, and on this account soda-ash should always be used with it About ten grains of soda-ash and the same amount of barilla should be given to each hog two or three times daily, mixed in their food. This should be given to the healthy as well as the sick hogs. To the well it does no harm; to the sick it is a successful remedy.

As in the human species, so in hogs—inflammation of the lungs is a most insidious disease, going on to the destruction of the patient before the mere symptoms give cause of alarm, and in many instances hogs which appeared healthy were yet seriously affected with lung inflammation.

The above remedies were used on about three thousand hogs, and in the utmost intensity of the disease. The number of their deaths diminished seventy-five per cent on the second day after their administration, and in a short time the disease disappeared from the locality. As soon as the hogs were manifestly sick they were put in pens by themselves, and subjected to the above treatment. Of these about thirty per cent recovered, whilst before all died.

Causes.—It is a disease of general atmospheric origin, influenced by special, local, exciting causes, such as the sweating sickness, blackdeath, cholera, and other epidemics, which at different times have devastated, more or less, all parts of the earth, and of whose intrinsic nature we know but very little. It is not confined to distilleries, but has also proved destructive in the country. It is not produced by strychnine, or any vegetable or mineral poison.

The disease attended with swollen jaws, the proper name of which is hog quinsy, prevailing in some parts of the State, has no connection with the above, and can be most successfully treated by making incisions over the swelling and then pouring in a small quantity of salt and turpentine.

I should be obliged to persons throughout the United States, who have observed this disease, to examine the blood and the different organs, and report to me the results; should any be incapable of making an analysis of the blood, I will with pleasure furnish them with the instructions how to perform it.

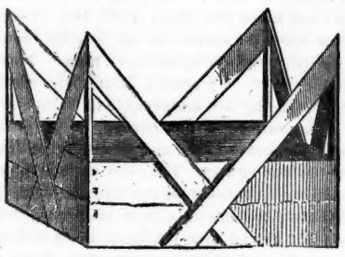
TRIALS OF SPEED.

To the Editor of the American Agriculturist:

I am pleased with the remarks in your paper for November, page 247, on Agricultural Shows, as conducted of late. I have attended the State Shows in this and an adjoining State, and several of the County Shows, the present season; and am free to say that the all-absorbing topic with the multitude, on those occasions, was the *race course.* The best and most successful Show that I have attended, was in a county where no race course was constructed, and [illegible] as possible. His speed are allowed. [illegible]ve no ginger-

What benefit comes of such tria[illegible] substantial, animals improved thereby? Does any [illegible]pair. wishes to buy a horse for his own or his fa[illegible] them use, ever think of putting him to the top of [illegible]r. speed? Will he think any better of an animal for these uses, that will go a mile in 2.40, than one that uses 4 minutes in going a mile. Jockeys, and jockeys chiefly, are admirers of this extra speed. If there were any good in it, there is so much more *evil* than *good* appertenant thereto, that I am glad to find you, as one of the guardians of the habits of society, have set your face decidedly against it. Pardon my presumption in thus speaking. I know that the case will be argued much better by yourself. J. W. P.

Essex Co., Mass., Nov. 2, 1857.



CATTLE RACKS.

To the Editor of the American Agriculturist:

Among the contrivances to keep fodder from being trodden under foot by cattle when fed in the yard, I have found a kind of feeding box like the above to answer a very good purpose. It is very easily built by any one who can use a saw and hammer. It consists simply of four upright posts, say five feet in length, with boards nailed to them as seen in the engraving. Three by four inch scantling is sufficient for the corner posts. The eight boards, two on each side, of which the box is first made, should be about six feet in length and fifteen inches in width. If they can not readily be found as wide, use three boards in hight, or leave a narrow space between two. The frame should be sufficiently high to prevent cattle from stepping over the sides. To guard against this, as well as strengthen the whole, it is a good plan to nail narrow strips of plank flatwise across the upper end of the posts. These are not shown in the engraving. Next nail two boards diagonally upon each side, extending from the top of the posts to the bottom of the box as represented in the cut, leaving a space of about two feet between them at the centre of the frame, on a line with the upper board. These boards strengthen the whole and make four feeding places for the cattle. The rack is now complete. Stand it in a dry part of the yard and throw in a fork full of hay, straw or corn stalks, and four animals will soon take their places upon the different sides. The posts and slanting boards prevent any tyranical ox from driving away his next neighbor, while the width is such that the opposite animal can not be reached. Whenever desired, the frame can be lifted and set in another part of the yard. Unless the ground is dry it is well to lay a few old rails in the oottom. In a large yard four, six or eight or more can stand in the different parts, and with proper use they will last for several years. T. C.

Kennebec, Me., Nov. 3. 1857.

The Crescent.—It has been asked among other curious questions, why the Mahomedans carry the crescent or figure of the moon upon

housed, supplied with food and water in abundance, and at regular hours.

Books.—Our last glance will be at his book-case. Here we find, as we expected, his farm accounts, and the footing-up shows the balance on the right side. Here, too, are the best treatises on agriculture, as well as instructive books in various departments of literature. He is a book farmer Byzan[illegible] true sense of that term; a man who practic[illegible] place, [illegible]rding to well-settled principles, and not cal power, a[illegible]e. Here, also, are one or more of retained its pla[illegible]rs of the day devoted to the wants [illegible]ot the least important of which, VISIT TO A [illegible]y, is the *American Agricul-* FAR[illegible]

Tired of City Life—Chinese Sugerican Agriculturist. ment among Farmers—Description, House. [illegible]BER III.

[The writer of the following communication recognized by many of the former readers of the Penn[illegible] of vania Farm Journal.—Ed.] [illegible]f

To the Editor of the American Agriculturist:

A visit made a few days since to the farm of M. W. Baldwin, the great locomotive builder of this city, has given new life to my farming notions, and affords ample material for new and lengthened dreams of what I shall do when kind Providence smiles upon my efforts to get away from this din of cart wheels and brokers' tongues, into a more quiet and honest atmosphere, where the fruits of one's labor is ever before him in the substantial staples of human existence unprotected by lock or bar, instead of a piece of paper three inches by six promising to pay at some future day, three other promises to pay—which may be all right, provided no fright dims the sight of our "necessary institutions,"—inducing them to say, we can not pay, 'till things clear away—though if you want food, we'll mark your check good; for we want to assist, but to open our fist it is not our intention—unless the people say, you must and shall pay; and to put that day very far away we confide in our Legislature.

The chief object of our visit to Mr. Baldwin, being to witness the manufacture of the "Sorghum Syrup," we repaired immediately to the field where the cane was growing, and where also the mill was stationed for pressing out the juice. Here we found the farmer, J. F. Lukens, overseeing his men and busily engaged in selecting the best seed for sale and planting next year. He soon introduced us to the whole *modus operandi*, and although by no means complete in his arrangments for "boiling down," yet such is his entire success, and so strong his faith in its becoming an economical and even profitable crop of our States, that he anticipates providing himself another year with all the equipments necessary to an easy and expiditious manufacture of the syrup. The result of his experiment is about *four hundred gallons* of syrup from the acre, which he is now disposing of at 75c. per gallon, less 10c. per gallon for commissions; and about sixty bushels of selected seed. It will be of immense service to your readers to keep them thoroughly posted up as to all the merits and demerits of the subject, which will be developed by this year's experiments; for from present appearances it would seem that a large amount of capital will be invested another year for making the syrup, unless some counteracting evidence appears in time to prevent the outlay.

Having satisfied our curiosity here, we proceeded to view other portions of the farm and the buildings, all of which spoke well for the superintendence of Mr. Lukens, whose kind and gentlemanly attention and freedom of converse, added greatly to our pleasure and knowledge. And by the way

let me here remark that polished manners, and refined conversation do not destroy the *manliness* of a farmer in the least; neither do they impair his powers of endurance; but rather add lustre to his character, and shed light and happiness all around—in fact I should prefer the life of the spendthrift or the jockey. to that of the farmer who has lost his mentality, who simply drudges *without thought*, for it is equally prejudicial to his eternal happiness, without one particle of enjoyment of even the things that *are*. All the beauty and marvelousness of the Creator's works are lost in the gross lethargy and impenetrable darkness that pervades the citadel of his thoughts. He fails "to consider the heavens, the works of God's finger; the sun and the moon which he has ordained;" he rises early in the morning only to commence drudging, and beholds not "the Sun as a bridegroom coming out of his chamber, and rejoicing as a strong man to run a race;" he hails the revival of a faded world after a genial shower, with the unthankful grunt "I guess we've had rain enough," while the grateful thought, "Thou God renewest the face of the earth," never enters his beclouded mind—he sees after the pigs and the poultry and talks about his men "gwine for to haul out some dung," but he never sees "the birds building their nests, the springs running among the valleys, the grass growing for the cattle, and herbs for the service of man." But let the springs cease to flow, and the grass and herbs cease to grow, then see how quick he is to perceive it. God himself has said, "I will that men magnify my works which they behold"—But to return. The poultry yard and houses were in excellent order, and the latter arranged in a manner very conducive to the comfort of the fowls. They were divided into several apartments or rooms. A description of one will answer for all. Suppose the room to be 20 feet long by 10 wide. Along the back part is a pathway, by the side of which and in front are tiers of boxes for nests, with openings in front and small hinged doors in the rear along the path, through which the eggs may be gathered without letting the hens see you. Immediately over the nests and extending downwards in front, at an angle of about 45°, are the roosts made of lath about 12 inches apart, and close to which, on the under side, at the same angle, is a tight board floor, which being sprinkled with a little powdered lime*, serves to convey all the droppings into a trough below, and which with all other portions of the house, are thoroughly cleansed every day, and the rich gleanings carefully deposited in a receptacle provided for the purpose, to disappoint, so far as it goes, Johnny Bull's holders of Peruvian Bonds.

Leaving the poultry, we proceeded to the park, the gardens, the vineyard, the green house, tool house, seed room, duck and fish ponds, &c., &c., all of which, though furnished and decorated with much taste and even splendor, served only to deepen our admiration for the plain, unostentatious, substantial and inexpensive indispensibles of an old fashioned farm house. Other matters connected with our visit, including a most bountiful supper and a break-down (*going home*), I will not now trouble you with. HARDY.

PHILADELPHIA, Nov 6, 1857.

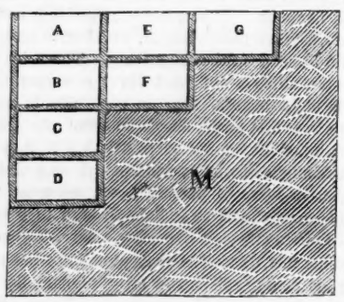
* Lime should never be used with poultry droppings as it expels any ammonia formed. Plaster is far better.—ED.

A CURIOSITY.—The Hightstown Excelsior, N. J., of Oct. 1st, '57, in referring to the *Agriculturist*, says: "This is undoubtedly the cheapest and best agricultural periodical published. The man who could not get the worth of a dollar from a year's perusal of it, would be a curiosity." So say all.

HOW TO DIG MUCK IN WINTER.

This strikes most persons, as impracticable business. The common impression is, that most swamps are so wet, that the water would follow one faster than he could throw out the muck. But in a great majority of cases, where the peat or muck lies in swamps, that are only overflowed in times of heavy rains the digging can be carried on in all pleasant Winter weather, when it is suitable for men and animals to be at work out of doors. Many of these swamps are in hollows, or are sheltered by woods and brush, so that the force of the keen Winter winds is broken.

Of course, the more you can free the surface from water, before commencing operations the better. The muck swamp has generally an outlet, and by a little ditching at this spot, the water can frequently be drawn off from one to two feet. If we can make the water level two or three inches below the surface of the swamp, there is no difficulty in working the muck mine. This article may even be procured from many spots in the Winter, that are inaccessible in warm weather. The surface is now frozen, so as to bear teams, and heavy loads, and we can drive directly to the loading spot. The solid surface is easily broken with a crowbar, or cut with an old ax. The only enemy to contend with is the water, which flows into the pit from which the muck is thrown out, but this can easily be overcome. If the surface is frozen no water will come in from the top, and you will only have to guard against that which oozes in very slowly from the sides of the pit. This is best done by digging the muck in a series of narrow pits, and carting it off as fast as you dig, or within a few days. The accompanying diagram will illustrate the method of proceeding.



M, is the muck or peat swamp. Commence at one corner, or in any spot that may be accessible to the team. Mark off the pit A, in the form of a parallellogram, say eight feet wide, and of any length, that your laborers can finish in a half day. Eight feet is about the right width for depositing all the contents of the pit upon both sides. If, for any cause, you wish to throw it all upon one side, the pit should be only four feet wide. The length will have to depend upon the depth of the muck, the number of men employed in spading, and the rapidity with which the water flows in. The quicker you can throw it out, the less the water will trouble the workmen. Hence it is better to have three or four laborers for this kind of work, than one. If the muck is four feet deep, every four feet of the pit in length will make a cord, and a good workman in clear digging, ought to throw out twelve feet in length, or more, in a half day, that is three cords. In ordinary cases, when the pit is cleared there will not be more than four or five inches of water in the bottom. The water will often not reach its level in this pit for twenty-four hours or more. Of course there is a drainage from all sides of the pit, making the surface drier, and the water less troublesome.

You have now the pit A, cleaned out with a bank of muck on each side. If the muck is carted off as fast as thrown out, you can proceed in the direction of B. If it is not, you can proceed in the direction of E, to mark off the second pit. Care should be taken to leave a strong partition, at least eighteen inches thick, between the pit A and E. It is a good plan to let the muck stand long enough, say three or four days, for the water to drain out of it. It saves nearly half the expense of carting. We would therefore recommend that the work proceed on the second and third days in the direction of pit G. When the muck is carted off from the banks of the pit A, you can begin with the second tier of pits at B, and proceed as before. Care must be taken to leave the banks at the *sides* of the pits a little stronger than at the ends.

After a short time, the water in the first tier of pits will be frozen hard enough to bear, so that the muck from the second tier can be thrown on to the ice. Proceeding in this manner, you waste little of the land in embankments, and are not much troubled with water. With good waterproof boots this is really not so uncomfortable, as many other kinds of work done in Winter. It is safe and profitable, and such glorious crops as it makes will be a glad sight for the eyes in harvest.

EXPERIENCE WITH MUCK.

To the Editor of the American Agriculturist:

Having been a reader of your paper for some time, and noticing the particular points and suggestions in it, I have acted accordingly, in a measure. The great trouble with Connecticut farmers, is the want of manure, and although the majority of them have the *material* in abundance, they neglect to accumulate, and compost it, and are the losers thereby. The cry has been in your paper, muck, muck, use muck, leaves, &c, and I write now to give you a very brief history of my success in using this *cheap* and abundant compost.

In the Summer of 1855 I had an upland lot, preparing for wheat or rye, and having no funds to spare for the purchase of guano, bone dust, &c., I concluded to try what could be done at home. With a team and man we commenced drawing muck from a pond, and in four days had one hundred loads on two acres of ground. The ground was again plowed, thus mixing the muck, and on the 15th of September was sown with wheat. It was harvested the following July, and when threshed and exhibited at the County Agricultural Fair received the premium for being the best wheat exhibited. The next season the plot was sown with oats, and such a crop was never raised on the *old homestead*, and all without any other manure. This season we have put *eight hundred* loads on five acres, sown to wheat and rye, and expect to be able to give you and the farming community as good a report, if not better, from the crops next summer. In addition to the above, on the first lot, we this Summer cut, per acre, three tons of as good timothy hay as was ever housed, and up to this present writing, the feed is good, and cows easily fill themselves from it daily. Let every farmer, who can, try an acre with muck, and he certainly will be repaid four-fold.

More anon, DOCTOR.

West Norwalk, Ct., Nov. 4, 1857.

A "Fast" man undertook the task of teasing an eccentric preacher...."Do you believe," he said, "in the story of the prodigal son and the fattened calf?"...."Yes," said the preacher...."Well, then, was it a male or female calf that was killed?"

"A female," promptly replied the divine.

"How do you know that?"."Because, (looking the interrogater steadily in the face,) I see that the male is alive now."

LARGEST YIELD OF CORN ON RECORD.

A correspondent writing from Vanderburg County, Indiana, informs us that at the State Agricultual Exhibition a Silver Pitcher was awarded for the best *five* acres of corn. The award was made upon the decision of three disinterested men in each town, who examined the corn growing in the fields, and measured one acre of each plot. They then made oath to the yield of the single acre, and of the whole five estimated from the acre actually measured. The award made, under oath, was for 857½ bushels of shelled corn on five acres, or 171½ bushels to the acre.

If this has been excelled at any other time, or in any other place, we shall be glad to hear of it. Till we do we shall put VANDERBURG COUNTY, INDIANA, at the head of the corn column—unless we hear of some mistake in the above report.

A TALK ON ORDERLY FARMING.

There is so much disorderly farming in vogue, we have thought we might do a useful service in drawing a picture of the opposite; we mean a style of husbandry which has a place and time for everything, and does everything in its place and time; which seeks, in short, to carry on all the operations of the farm in the best possible manner. It cannot be denied that very many farmers lack the quality to which we here allude. They plow and manure, and rotate crops; they buy, raise and sell stock, and manage their household affairs very much at hap-hazard, with little forethought and method. We are well aware that it is hard to resist the power of bad example; that it is easy to do as our fathers did before us, and as our neighbors do around; that unforseen circumstances will arise to break in upon the best matured system: we admit all this, yet we know that it is best to reduce our style of farming to a well-digested plan, and to strive by all means to make circumstances bend to that plan. By firm resolution and energy, more can be done in this matter than is often supposed. There is meaning in the old proverbs that "Fortune favors the brave," and that "The lucky man is generally the energetic and industrious man." But now to our picture:

Health.—The orderly farmer takes care of his health. He does not expose himself unnecessarily to wet and cold; does not go with damp feet and insufficient clothing; does not overwork himself in planting-time, and in haying and harvesting; does not worry himself with undue anxiety about the weather, or the success of crops, and so expose himself to the assaults of disease. He keeps his head cool, his heart cheerful, his passions under control, and so builds up and fortifies his citadel of strength that he is seldom interrupted in his daily labors.

Buildings.—Look now at his buildings. His dwelling-house is not, indeed, pretentious; that would be out of keeping with the character of the man, and of his employment; but it is comfortable, convenient, neat. It is roomy, like his heart. It is a good protection against all the vicissitudes of the seasons. What a spacious cellar! How well arranged for storing all kinds of fruit and vegetables, and the various other articles needful in good housekeeping. And then, it is frost-proof and rat-proof, and is kept as "neat as a pin." The rooms above ground are planned for convenience in dispatching household duties. The parlor and living-room look attractive; kitchen, pantries, closets, milk-room, wood-house, well-house, cistern, sinks and drains, are all just where they should be, or as near to that as possible. His barns and other out-buildings have no gingerbread work about them, but they are substantial, suited to their purpose, and are kept in repair.

Fences—Glance at his fences. Some of them are the old Virginia rail, but they are not suffered to become tipsy; some of them are post and board, and here and there hedges are beginning to appear. He is not yet perfectly satisfied with any hedge-plant for a permanent farm fence. The buckthorn is hardly thorny enough to turn cattle; the hawthorn is liable to several diseases; the thorn-locust is rampant, and needs considerable care, but answers tolerably well. The osage orange is just the thing, if it proves hardy enough for his climate. He is giving it a thorough trial. But whatever kind of fence he may have for any field, he does not suffer it to become dilapidated. Good fences, he knows, have much to do in making good neighbors; he values his own peace of mind too highly—saying nothing about his crops—to leave his fields exposed to the inroads of vicious cattle. Broken rails are, therefore, replaced with new ones, and if a board gets off, it is soon observed and nailed on again.

Mode of Tillage.—Notice his mode of tillage. As a ground-work of the whole, he has drained his low, swampy lands, and not those only, but other parts of his farm which were found to have superabundant moisture at any season of the year. He was systematic even in doing this. It would have cost too much labor and money to have undertaken all at once. So he distributed the work through several years, doing the most important first, and the remainder as time and means permitted. And the work pays as it goes. Thorough plowing and manuring go hand in hand with draining. The skinning system he leaves for others: *his* plows are of the kind which go down into the soil, not merely scratch the surface. No manures are wasted on his premises; they are never so highly concentrated as to need dilution by exposure to rain and sun and wind. If anything of this sort is needed, he thinks it best to incorporate with them muck or straw, and to lay them up in heaps, under sheds or in barn-cellars. Nor does he confine his work to a single season. The well-prepared field is sown or planted with good seed, and then it is well tilled throughout the Summer. The cultivator and hoe are kept always bright, the soil kept mellow, the crops always growing, and the weeds kept in constant subjection.

Implements, Seeds and Stock.—His selection of these is worthy of notice. He likes not to make farming an unnecessary drudgery. Hence, whenever he can find a machine that will economically save human labor, he buys it at once. He takes pains to inform himself as to the best patterns that he may not be imposed upon by unprincipled venders. So in the choice of seeds. He is careful to save from his own crops those which mature the earliest, and develop themselves in the best manner. And, lest they should deteriorate somewhat, by being too long grown on the same soil, he exchanges with orderly farmers in other places. If he learns of new varieties which promise well, he does not scout them at once as humbugs. He goes to reliable sources of information, or he makes careful experiments, and then adopts or rejects the new comer as its merits seem to require. He is not afraid to prove new things, yet is quite sure to hold fast to the old which are known to be good. The same system is shown in his purchases and care of stock. He is not ignorant of the respective merits of imported breeds; but whatever "the blood" of his animals, they are well cared for. They are well housed, supplied with food and water in abundance, and at regular hours.

Books.—Our last glance will be at his book-case. Here we find, as we expected, his farm accounts, and the footing-up shows the balance on the right side. Here, too, are the best treatises on agriculture, as well as instructive books in various departments of literature. He is a book farmer in the true sense of that term; a man who practices according to well-settled principles, and not simply by rote. Here, also, are one or more of the leading papers of the day devoted to the wants of his occupation, not the least important of which, we should of course say, is the *American Agriculturist.*

For the American Agriculturist.

WANT OF TIME.

LESSONS IN LIFE BY A GLEANER—NUMBER III.

I do not know as there is another source of complaint among farmers so universal, as that of the "want of time." One, for example, believes that education is a good thing, regrets that he never had it, and wishes his boys might have a better chance, but he is crowded for time and can't spare them. There is so much to do, and besides, they must be earning something to start with when they become men. Another acknowledges that his farm arrangements are not just right, as, for instance, there should be a gate where there is now a pair of bars; should be two hinges where there is now but one; should be a ditch where is now a marsh, and should be a cistern where is now a barrel. And so of a multitude of like inconveniences, but he has not the time to fix them yet. And this is the case among all classes. Ask a man if such a plan would not be an improvement, "Yes; I mean to have it so if I ever find time."

Now I claim that many, if not all such persons, have got the cart before the horse, they are ever trying to stretch the time to suit their work, whereas they should plan their work for the time. Jack Bobstay's horse could have gone a mile in three minutes with ease, *only* the distance was too much for the time. It is not for me to name the number of acres a man may undertake to till, and have leisure time to keep his garden, orchard, barns, gates, &c., all in fine condition,—for there are many considerations in deciding the question,—but I do earnestly protest that every farmer should lay his plans so as to *have time* for reading, for study, and for improvement.

Let me illustrate: I know a man who, during the dry season, goes 50 rods after water for his family's use, because his well, not being quite deep enough, dries with every drouth, and he has never had time to build a cistern. He actually carries two to four pails of water twice a day that distance, for weeks at a time, and yet is not mathematician enough (though he has taught school *more* than a score of Winters,) to know how much more time he has wasted than would have been required to build a reservoir for keeping an unfailing supply of water.

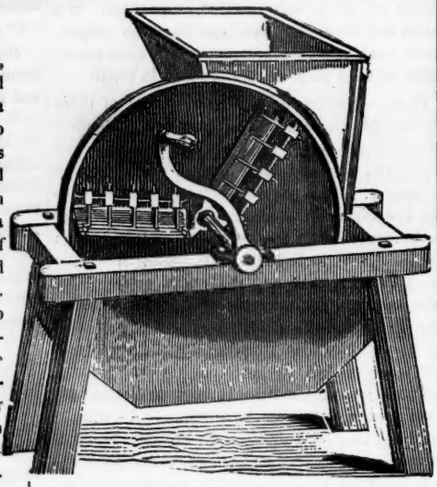
X. L. C. ORR.

The Superintendent of a certain Railroad discharged a conductor belonging to that road. The conductor was asked why he was discharged. "Well!" said he, "I was discharged for giving a free pass." "What made you such a fool as to give a free pass!" "Well! you see!" replied the Conductor, "I got tired riding *alone!*"

Seldom grow the same crop, or crops of the same family on the same spot, without an intervening crop of a different nature.

VEGETABLE CUTTER.

All who have had occasion to feed turnips, beets, potatoes, cabbage stalks, pumpkins, and such like articles, know full well how tedious a job it is, to cut them by hand sufficiently fine to ensure safety in feeding. We have ourselves lost more than one good animal by choking, and we long since stopped feeding turnips which were not cooked soft, or cut one by one with a hand-knife. To say nothing of the danger of feeding imperfectly cut roots, the time required in the old-fashioned mode is an important item. Various implements have been constructed to do the work with greater accuracy. We present herewith an engraving of the best one we have seen. It is constructed essentially as follows: A box or hopper, holding a bushel or more, receives the roots. At the bottom is an opening upon the side. Against this plays a series of knives attached to a flat wheel or cylinder. These knives shave or plane off slices from the roots in the box. The sliced roots are forced through the cylinder, like shavings through a joiner's plane, and short knives are arranged crosswise so as to cut the flat slices into small strips.



The whole apparatus is simple and works very rapidly. One like that here shown costs about $10 at retail, and by hard pushing it will cut a bushel of turnips per minute. Thirty to forty bushels per hour are readily cut as finely as could be desired. We believe this implement is *not* patented. It is for sale at most places where agricultural tools are kept.

IN DEBT FOR HIS FARM.

This is the case with many throughout the length and breadth of the land. Not having all the needful cash on hand to purchase their farms at once, they paid what they could, and gave a mortgage for the remainder. Very well. They now have a powerful motive to industry. Every dollar saved is at least as good as one earned, and every dollar earned is a new step towards independence. From year to year, the incumbrance grows a little lighter, and the prospect of a competence a little brighter. But some tell us that the good time is a long while in coming; they do not make farming as profitable as they could wish: can we help them by any suggestions?

We reply that we know of no royal road to riches through agriculture more than in other pursuits. But we are assured that much can be gained by farming in an intelligent and thorough manner. It will not do to work at random, or by rote, even though one work like a slave. It will not do to work with poor and insufficient implements. It will not do to waste time and strength and manure on wet land, when it ought to be drained. It will not pay off the debt, to let the manure heap waste its virtues in the sun and rain. In short, it will not answer to labor hard and hoard with one hand, while wasting with the other.

But we can not go into details on this subject: it would only be rehearsing the lessons we have so long and so largely taught in our columns heretofore. We can say, however, most truthfully, that one of the best ways to learn how to reduce the farm debt rapidly, will be to read one or more of the leading agricultural journals. They give instructions in economy; they teach how to make the most of a little; they abound in facts, notes of experience and observation; in short, they teach how to farm in the best and most profitable manner. A little money and thinking so invested will yield the most ample returns. In our own experience, we remember a single hint obtained from an agricultural paper, in regard to putting in a grain crop, which was clearly worth sixty-two dollars the same year. This and similar results on our own farm and on others, more than anything else, led us to our present field of labor. We are confident that no one can take and read even the poorest agricultural paper in the country, without deriving hints and suggestions therefrom, which will in the long run pay him enough to meet the expense of a hundred annual subscriptions.

TREATMENT OF SALT MARSHES.

We are glad to see the increasing interest in this class of lands, indicated by the inquiries of our correspondents. There are, as yet, but few examples of the successful reclaiming of salt marshes in this country, and there has been less said upon this topic, than upon almost any other branch of farm economy. They are really the richest lands we have, and as a class are more valuable than the swamps and inland marshes. In addition to the inexhaustible supplies of muck, common to both, these have unlimited supplies of salt and animal matter left upon them for ages by the overflow of the tides. Instead of being left as they are, marine wastes producing only coarse unpalatable grasses, they ought to be reclaimed from the dominion of the sea, and turned into meadows. Every one who owns one of these marshes, has probably thought of shutting off the sea water, but has over estimated the difficulty of making the embankment, and putting in a tide gate. As we have had a little experience in this business we will detail it for the benefit of our readers. We have now a thick set clover and herd's-grass sod upon land that was, two year's ago, flowed by the tide. The marsh lies inside of a railroad, so that the embankment was already formed and the only work to be done was the ditching, and putting in a tide gate, at the culvert.

THE EMBANKMENT

is a matter of the first importance, and where it is to be exposed to any considerable depth of water at high tide, say two or three feet, it should be made of stone upon the outside, and supported with a bank of marsh sods, or gravel, upon the inside. It is a good plan to have a cart path upon the embankment and to make it solid by travel.

THE CULVERT AND TIDE-GATE

should be made in the most thorough manner, and of the best material, as upon these the whole success of the work depends. The embankment at the sides of the gate should be fortified with plank, driven deep into the mud, and battened so as to compel all the water to pass through the gate. The gate should be made of stout plank, oak, chestnut or yellow pine, two and a half or three inches thick. The bottom of it should be as low as low water mark, so that the water can run off until the returning tide shuts the gate. The hinges should be made of composition or copper to prevent rust.

DITCHES.

There should be a broad ditch surrounding the marsh to cut off all fresh water springs. The other ditches are only wanted to carry off the rain that falls. They should be frequent and narrow, and cut to the low water mark. The contents of these ditches will more than pay for digging them, to be used in the yards and stables, as an absorbent.

CROPS ADAPTED TO MARSHES.

The only crop we would recommend for the first ten years at least, is grass. The sod is so thick and tough that it will not rot in years, unless lime or stable manure is used in large quantities. Clover, herds-grass, and red-top may be sowed upon the sod a few months after the tide gate is put in, and they will catch much better than upon upland. There is not salt enough in the sod to injure the seeds after a few heavy rains have fallen. We have sown in March, and in August and September, and have had good success at each sowing, but, on the whole, prefer sowing upon the snow in March, to any other time. The sod is then wet like a sponge, and the melting snows and rains of Spring carry the seed down into the little crevices of the turf, where they soon strike root. We have cut stout herd's-grass this season, from seed sown last Spring.

WEEDS.

These will spring up in great quantity, after the first year, especially if the marsh is at any time flowed with a fresh water stream. Multitudes of seeds that were formerly killed by the salt, now strike root, and multiply with wonderful rapidity. If these are not attended to, they will injure the quality of the hay, as it is impossible to seperate them at mowing time. The simplest remedy for these is prevention, by mowing the reclaimed land, at least twice in the season, and thus suffering no weed to go to seed.

DRESSING WITH SOIL.

It will be asked if this process will pay? We have experimented with various soils, such as poor yellow subsoil, surface soil of old pasture, garden soil, and with mud taken from the ditches. The grass is good where there is nothing, but is much better with the subsoil, better still with surface soil and ditch mud, and best with garden soil. Owing to some changes in our premises we had enough of this last to cover nearly two acres with a thin coat, say a half inch in thickness. Here the grass is thickly matted and would turn a good swath on this 14th of November. Where one has available soil near by, we have no doubt that it will pay abundantly to dress an inch thick or more. It may be done before or after sowing the grass seed.

MUSKRATS

are a great hinderance to this improvement. They will bore the banks of the ditches, and gnaw the wood work about the tide-gate. Unless the embankment is made very substantial, they would be likely to perforate that, and hasten its destruction. The tide-gate where the water passes through should be sheathed with the yellow metal which is used for the bottoms of ships. This is proof against the teeth of these animals. In the ditches, they are readily trapped, and one who is skilled in hunting, will soon destroy them. They are taken by putting a net-work bag over the mouth of their holes, which are always just under

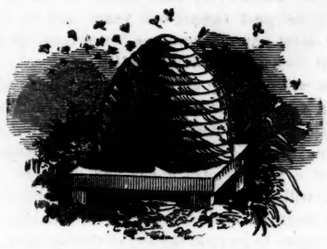
water. By jumping on the marsh above, they become alarmed, and rush for the water, where they are speedily bagged. To trap them, stop up the ditch where they pass, except a narrow passage of six inches in width. Put a flat stone about two inches beneath the surface of the water, and upon this set a common steel trap. They are sure to be caught in passing. There are no difficulties in reclaiming these marshes but may be easily surmounted, and when the work is done we are certain that every one will be highly gratified with the results. As these marshes now lie, they are hardly worth twenty dollars an acre. When once swarded with herds-grass they are worth a hundred or more. We think ours will pay the interest on three hundred dollars an acre. On the ten acres where two years ago scarce two tons of poor salt hay were cut, this year ten tons were gathered of excellent quality. Judging from the present appearance of the sod, the quantity will be doubled next year.

AN EXAMPLE OF UNDER-DRAINING.

It is frequently said, and oftener felt than said, by those farmers who have never tried underdraining, that our articles are too theoretical and the benefits of the operation are greatly over estimated. We can not blame any one for entertaining this opinion until he sees for himself an example of its advantages. We have recently visited the farm of Stephen Hoyt & Sons, of New-Canaan, Ct., where our views of draining are amply illustrated.

They carry on the nurserry business in connection with farming, and were first led into underdraining by the loss of a large number of trees by Winter killing. They rightly attributed this loss to a heavy wet soil, and determined to remedy it. They put down underdrains, three or four feet deep, at distances of about forty feet, filling the bottom with cobble stone in the style of fig. 15, page 222 of our October issue. In a single field they have put down over a mile of this kind of drain. They are very careful in packing the surface of the cobbles with very small stones, and covering with straw and sods so as to prevent the sifting of dirt down among the stones. The character of this field has been entirely changed, so that no crop is Winter killed.

They are so well pleased with this kind of underdraining, that they are extending their drains over the whole farm as rapidly as they can. The soil is tenacious, not of the first quality, and much of the sub-soil is full of cobbles, which makes the digging of drains very expensive. But they find it pays an interest of twelve per cent for all the capital they invest in this operation. It costs not far from fifty dollars an acre to clear of the rocks and to drain the wet places. When a field is thus cleared and drained, the value is advanced from forty dollars to two hundred dollars an acre, and it pays the interest on that sum much better than it did on the first cost, without the improvement. We found here all the advantages we have ever claimed for underdraining fully realized. We saw extensive fields of corn, carrots, turnips, parsnips, onions and beets, upon this underdrained land. They find no difficulty in getting good turnips upon these fields, and when this want in American husbandry is supplied, we have little doubt, that our turnip crop will approximate to the place it holds in English husbandry. The finest orchards are upon this drained soil, and trees eight years old are now as large as many that we have seen in orchards planted twenty years ago. We are persuaded, that if any of our sceptical friends will visit this farm, or any other where thorough draining has been tried, their unbelief will give place to a faith that will work.



WONDERS OF THE BEE-HIVE.

Number VI.

[We have in course of preparation several large, beautiful and instructive engravings for these Chapters, which we reserve to the next number in order to have them all in the same Volume.]

One of the curious sights in a hive is the cluster which the bees make. Their nature is such that they need a high degree of animal heat. A single bee would soon perish from cold, but when thousands cluster together, they can endure the severity of our hardest Winters. But in forming the cluster, they do not lie down close together like a litter of pigs, nor stand side by side like a flock of sheep. Their mode is to hang themselves from the ceiling or roof of the hive, or from the branch of a tree. Some hundreds of them take hold of the underside of the roof with their fore-feet which terminate in sharp claws, and stretch themselves out at full length. Their hind legs hang down so that another set of bees can grasp them with their forefeet, and others still hang to them. But these chains get linked together, each bee perhaps hanging from two, and thus festoons are formed, and the shape of the whole mass is that of a sugar loaf with the small end down. We had occasion once to turn upside down a box containing several hundred bees, and as they gradually accommodated themselves to their new position, we found at the bottom of the chain a bee, which, while clinging to those above him with its fore-feet, held in its hind feet a shingle nail that happened to be loose in the box; and from the nail still another bee hung. The latter dropped off pretty soon, but the first held on to the nail for half an hour before letting it fall. The number of bees in such a cluster is sometimes very large, and the weight is proportionally great, so that the strength of those tiny hooks with which the feet end off, is more than we should suppose.

Number of Bees in a Swarm.

The number of bees in an ordinary swarm, may be estimated by the actual weight. It has been found by experiment that a pound of bees contains about five thousand; and if one knows the weight of the hive in which he has put a new swarm, he can easily calculate the number of bees. It is desirable that a swarm should have at least 20,000 bees; sometimes there are three times as many. It is to be noticed, however, that a new swarm on going from the old hive, is heavily loaded with honey, and if no allowance were made for this, the estimate of numbers would be too large.

The *observing hive* allows us to watch each bee as it returns from its flight in search of food. Those that come with a load of pollen on their thighs, first attract our attention. This pollen is the food of the immature bees, and is kept stored away in readiness for consumption when needed. The supply is procured months before it is used. And it is essential to the well-being of a stock. though it is bitter to our taste, and makes the honey with which it is found unfit for market or for the table. We see a bee coming in, with its well balanced load sticking out on either side like panniers from a donkey. It marches along over the familiar road from the entrance to the comb. and instead of going up to the spare honey boxes, where the choicest stores are kept, it makes its way to the neighborhood of the breeding cells, and looks for an unoccupied spot. Passing by those that contain honey or brood, it selects a proper place, and thrusting its hind legs into the cell. it rubs them one against the other until the entire load is brushed off; and then leaving it to others to pack down the bee-bread, it starts off to make arrangements for delivering its cargo of honey.

The honey is brought to the hive in the *abdomen*, and is usually collected at the same time with the pollen. The bee brushes up the juice of the flowers with its five tongued proboscis, and swallows it. If when gorged with food, it were cut in two, the honey might be found in the sack of the abdomen. Or if the bee were suffered to light on a window, in a strong light, the semi-transparency of that part of its body would show that it was loaded with honey. A bee desiring to be relieved of its load, gives an invitation to the company to help themselves. This is done in a peculiar manner, if we have not misinterpreted their antics. Holding on to the comb with its forefeet, it shakes itself violently, and repeatedly, crowding away those that hinder its movements. As one comes to accept the offer, the two join their *probosces*, and the honey passes from one to the other. In the same way also they feed the mother-bee: but if the honey be not wanted for immediate use, it is poured into the cells provided for it.

Thus all the honey which we find in the hive is brought in, a few drops at a time, in the stomach, or more properly in the honey-bag of the bee; but

"Many a little makes a mickle,"

and *we* surely ought not to despise the results. It is not likely that any change is effected in the honey after it is collected from the flower, except that it becomes thicker by evaporation. Buck wheat honey is one thing in flavor, color and smell, and white clover honey is quite another thing. And as for the feeding mixtures which some people administer to their bees, we will only say they get no better than they give. If they give molasses they get molasses in the comb: and if they give West India honey, they will *not* get the apple blossom honey in return.

During the days when the honey harvest is abundant, the hives increase rapidly in weight, and sometimes all the profit of the entire year is made in the course of two or three weeks. Indeed the work accomplished in a few favorable days is almost incredible.

How much honey does a swarm make.

We have before us in the *Bienen Zeitung*, for 1856, an accurate and extended statement of daily observations made in Germany three years ago. A man took the trouble to weigh one of his hives twice a day, before the bees left it in the morning and after their return at night, and thus he determined the daily increase of weight, and the loss at night by consumption and evaporation. The observations were continued from the 5th of May to the 2nd of August, a period of 91 days. Some general idea of the whole may be formed from the following items which will repay the reader.

The hive, bees, comb, honey, brood, &c., weighed on the 5th of May 64 pounds; and after loosing two swarms, of seven and five pounds respectively, its weight on the 2nd of August was 120¾ pounds. This does not show all that the bees accomplished for the gathering of honey ceased almost entirely on the 27th of June, (five days before the departure of the second swarm,) at which time the en-

tire weight was 143 pound, showing an increase of 79 pounds in 54 days. The work of each day is minutely recorded. Beginning with the 5th day, the daily gain in weight during the month of MAY was as follows:

5— ⅜ lb. gain.	14— 9¼ lbs. gain.	23— 3½ lbs. gain.
6— ⅜ lb. gain.	15— ⅜ lb. gain.	24— 2⅝ lbs. gain.
7— 1⅜ lbs. gain.	16— ⅜ lb. gain.	25— ⅜ lb. loss.
8— 2⅝ lbs. gain.	17— 1 lb. gain.	26— 1 lb. gain.
9— 2 lbs. gain.	18—18½ lbs. gain!	27— ¼ lb. gain.
10— 2¾ lbs. gain.	19— ¾ lb. loss.	28— none.
11— 6¼ lbs. gain.	20— 2 lbs. gain.	29— none.
12— none.	21— 5½ lbs. gain.	30— ½ lb. gain.
13— ¼ lb. gain.	22— 4⅝ lbs. gain.	31— none.

The loss during night, by consumption and evaporation, varied from nothing to 1½ lbs., and amounted, during the month, to 10¾ lbs.

In JUNE the record stands thus:

1— 13⅛ lbs. gain.	11— 1⅝ lbs. gain.	21— 2½ lbs. gain.
2— ⅝ lb. gain.	12— 8 lbs. gain.	22— 4 lbs. gain.
3— none.	13— 3½ lbs. gain.	23— 1½ lbs. gain.
4— none.	14— 5⅞ lbs gain.	24— ⅝ lb. gain.
5— ⅛ lb. loss.	15— 17⅛ lbs. gain.	25— 1¾ lbs. gain.
6— 1¼ lbs. gain.	16— 7⅛ lbs. gain.	26— 4½ lbs. gain.
7— none.	17— 4½ lbs. gain.	27— 17⅛ lbs. gain.
8— ½ lb. gain.	18— 37⅛ lbs. loss *	28— ⅝ lb. loss.
9— 2 lbs. gain.	19— 6⅜ lbs. gain.	29— ⅛ lb. loss.
10— ⅝ lb. gain.	20— 5½ lbs. gain.	30— ⅛ lb. loss.

* On the 18th the first swarm, weighing 7 lbs., left, yet there was a loss of only 3⅞ lbs., showing that 3¼ lbs. of honey was brought in on the day of swarming.

From the 28th of June, to the 21st of July, no day showed an increase of weight except the 11th and 17th, when ½ and ⅝ of a pound were brought in; and the remainder of the term added only 3 pounds.

In May the *Rape* was in bloom, and the trees, especially of the forest; and the 18th, the day of such a large increase, is described as a *sultry* day, the *Rape* being in full bloom. It is remarkable that the following day, nothing was collected. From the middle of June the *Esparcet* was said to be in full flower.

We see no reason to distrust the accuracy of this record, and we should like to have similar observations made in this country. The results are affected by many matters easily overlooked. The increase of weight, for example, is not from the accumulation of honey alone, but from the bee-bread, and from the growth of the brood; and yet the latter item would be gradually operating, and would not explain the large increase of the most prosperous days. The accumulation of honey must be influenced also by the distance of the pasture ground from the hive, and the time required for the journey. And of course the consumption at night must be far greater in a hive where *new comb* is to be made, than in one where there is a full supply of empty cells. This table also shows that *if* the owner had desired to destroy his bees by sulphur, he would have gained by taking up the swarm on the 28th of June, without waiting for it to consume the honey after the supplies failed in the fields.

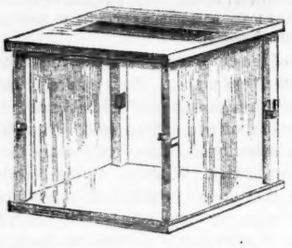
And while speaking of the consumption of honey, we may as well cite other facts. We have said above that the stock spoken of lost 22¾ pounds, (including an after swarm of five pounds) between June 27th and August 2. In the next two weeks of August, it lost in weight 2¾ pounds.

In Key's Treatise we find other experiments. A stock that weighed on the 2nd of Nov. 29 pounds 3 ounces, had lost, Feb. 26th, (115 days after) 5 pounds 2 ounces, or about ¾ of an ounce daily. This is at the rate of a pound in three weeks during the Winter, when there is less activity and less of consumption than in warmer seasons of the year. Much, however, depends on the number of the bees and their protection from the cold. The consumption during the Winter and Spring *may* be so small as to leave too little room for brood, and to make it desirable to rob the hives in the Spring. This is one of the things where great judgment is demanded of the bee-keeper.

GLASS HONEY BOXES.

"Patent Bee-Hives are all a humbug," writes a new subscriber, who goes on to say that "he has tried about every kind offered to the public during the past twenty odd years, and he finds the 'latest improvement' no better than the first patent hive used by him in 1834."

We will not stop nere to discuss the peculiar advantages of the various patent hives and bee-houses, but refer him to pages 6 and 7 of this volume, (Jan. No.), where will be found a description of a plain, simple, cheap and effective bee-hive, without patent. A number of inquirers wish more particular directions for making the glass cases to go upon the top of the box-hive, for holding the honey. We this Fall bought a box of Quinby's honey, sent to the Washington Market in this City, and removing the honey, have made the following drawing of the box:



This is 5 inches wide, 6 inches long, and 5½ inches high, including the top and bottom pieces. The top and bottom are made of thin, ¼ inch boards. At the four corners are upright pieces, say one-half to three-fourths of an inch square. Nails driven through the boards into each end of these corner pieces hold the frame-work together.

The four sides are of common window-glass, cut into the required size, which can be done without any waste. Formerly the glass was slipped down in small saw grooves made in the corner pieces. This was done before nailing on the cover. In the boxes sent here this year, we notice a different arrangement, which is perhaps an improvement. Instead of putting the glass into grooves it is simply placed against the outside of the corner pieces, and held there by bits of tin as shown in the engraving. These are made by cutting out pieces of tin, say 1½ inches long and ¾ inch wide. They are then slit with shears endwise, about half way through. The slit end is then thrust from the inside to the outside corner of the upright piece, so as to come out between the two edges of glass meeting at the outer corner of the box. One portion of the slit end is then turned to the right, and the other to the left, thus holding both pieces of glass. Made in this way the glass boxes are not so strong as in the other, but there is this advantage, that by simply bending out the tin, a side of the box can be removed without disturbing the covers or the honey within.

The box in our cut is placed upside down, to show the hole in the bottom piece for the entrance of the bees. As formerly described, these boxes are set over holes in the top of a hive, and covered over with a box-cap to shut out light, storms, &c. A pane of glass 10x12 inches will furnish the four sides, and the whole cost of the boxes will not exceed four to six cents each.

WHO EXHIBITED?—At the recent fair of the American Institute at the Crystal Palace, there were 1540 entries of articles exhibited. Of these New-York State contributed 1388, of which N. Y City, furnished 1133. Massachusetts, contributed 88 articles, a greater number than any other state beside New-York. Connecticut is next, and contributed 49 articles. New-Jersey is the next highest, and contributed 48. Pennsylvania next, had 29. Ohio had 5, Rhode-Island 5, Vermont also 5, Illinois 3, Missouri 3, Iowa 2, New-Hampshire 2, Maine 2, Maryland 2, Virginia 2; the District of Columbia, North and South Carolina, Georgia, Indiana, Wisconsin, Delaware and Alabama, one each.

TIM BUNKER ON FARM ROADS.

MR. EDITOR: I couldn't help thinking when I was off on my journey, riding on the rails, what an awful waste of horse and ox power there was on our farms. On a railway they get rid of all the obstacles, make the path solid, and have the running gear as perfect as possible. The power has very little friction to overcome, and is all spent in drawing the load. On a plank road, they do a good deal to remove obstacles, and make a solid road bed, but plank-roads and railroads on our farms are out of the question for doing ordinary farm work. The next best thing is the common high-way, in which there is some attention paid to the removal of rocks, to drainage, and to the making of a smooth firm road-bed. This kind of road is within the reach of all our farmers, and I think will pay a great deal better than the miserable cart paths that most of us are contented with. A farmer is just as well able to build what roads he needs to haul his wood, muck, manure, and crops, as a town is to build what roads they want for the mill, the market, the meeting, and the common convenience. Roads leading to the fields, and to the wood lot, that are a good deal used, ought to be worked every year as much as a common highway.

Only to think of the waste of time, of ox flesh, and of cart-tire, in hauling loads over such a road as uncle Jotham Sparrowgrass has upon his place! It leads down to what he calls his Lower Place, about a half mile from his house. Though it has been used for fifty years or more, he has never spent a day's work in mending it. There are rocks in the rut a foot high or more, and holes where the wheel goes in up to the hub, in all wet weather. I suppose his team has been driven over this road two hundred times in a year at least, with an average load of not more than three-fourths of what they would have drawn upon a good graveled path. In other words, if the cost of carting a load over this road is fifty conts, he has paid fifty dollars a year for the privilege of a rough road, to say nothing of the worrying of the teams, and the breaking down of the carts, and the swearing at the mud-holes. If any of the Hookertown people think that the swearing reflects at all upon uncle Jotham, they can suppose that the hired man drives the team sometimes, though I don't say who drives. You see, when the teamster finds himself with a load of green hickory stuck fast in three feet of mud, it is rather a trying position for the temper.

A few days' labor spent in digging stones, and hauling gravel, would make this road equal to a turnpike, and then it would not cost five dollars a year to keep it in repair. The teams would draw a full load instead of three-fourths, and the labor saved here could be devoted to other profitable work upon the farm. Now there are thousands of miles of just such miserable roads upon our farms, that ought to receive immediate attention. If there is any economy in having a good strong team, there is still more in having a good smooth road to work on.

Yours to command,

TIMOTHY BUNKER, ESQ.

Hookertown, Ct., Nov. 13, 1857.

DWARF PEARS WINTER-KILLED.

A neighbor of ours once complained that he had repeatedly lost several first-rate pear-trees and was beginning to lose his faith in pear culture. He gave them the very best care, manuring, pruning, pinching and all that, just as the books directed, and yet, after lingering a few years, many of his trees gave up the ghost. We went, one day, to look at his trees and to sympathize with him. About two rods from his rows of pears and on a rise of ground was a large manure heap. Every Winter, he said, his garden was thrown up into ridges leading down in rows from the dung-hill to the trees. "There," said we, "probably there in that pile of manure, is the enemy of your trees. The liquid manure runs down in those open drains all the year; but especially in Winter, and gives your trees too much of a good thing." "I guess you are right," said he, opening his eyes, "Strange, I never thought of that before." As we have heard no further complaints from him, we conclude that he has removed his manure heap, and that his trees are succeeding better.

TENDER SHRUBS—WINTER PROTECTION.

Many of the half hardy shrubs, both evergreen and deciduous, (leaf shedding), and not a few of the foreign trees now undergoing acclimation, or *naturalization*, require a partial winter protection while young. Most of these grow more hardy as they increase in size and age. Various coverings are recommended to shield them, such as boxes, barrels, mats, straw, burying with earth, &c. Barrels and boxes answer a pretty good purpose, when inverted over low-growing plants, provided there are sufficient holes in the top or sides for ventilation. One of these placed over a hydrangea in our grounds during the past winter protected it sufficiently from the weather, but—smothered it, so that the branches decayed in the Spring.

A good coating of straw is, upon the whole, the best protection, affording sufficient air to the tree or shrub, and turning off all water from the branches. If the plant or tree has straggling branches, they should be first drawn in and fastened with bands of straw or willow twigs, after which place stakes or poles around them in number and length according to the size and hight of the specimen to be inclosed. These stakes should extend from the ground, and be tied to a point a little above the plant. Weave in a few willow twigs at points up and down the stakes to prevent the straw from pressing too closely upon the branches of the shrub. Begin at the bottom by standing long rye-straw, say one-half to three-fourths of an inch in thickness, is sufficient around the bottom, passing twine around the upper part to keep it in place. Place another circle above this, the lower end breaking joints or extending a little below the upper part of the first covering. Proceed in this way till the top is reached. A single length of straw will often be sufficient. Double the top of this covering over, and tie it firmly as a cap to shed off rain. Twine should be wound around the whole at distances of ten inches or one foot to prevent heavy winds from blowing the straw about. Of course this covering is to be removed upon the approach of settled weather in the Spring.

A cone of this kind neatly constructed along the borders or paths of the flower garden is far from being an unsightly object, and the protection to the plant is of the best kind. Evergreen boughs are sometimes placed about shrubs instead of the straw, and answer as a tolerable substitute.

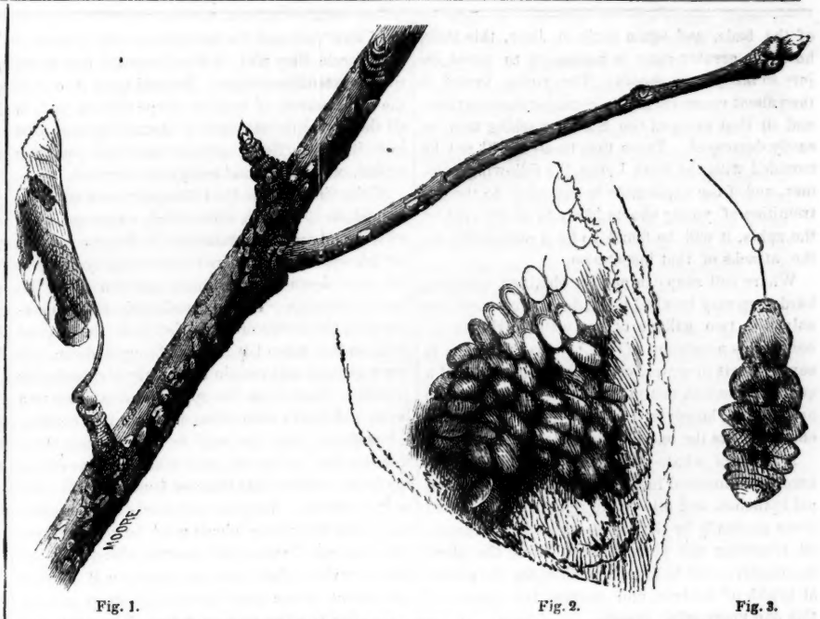


Fig. 1. Fig. 2. Fig. 3.

Fig. 1 represents a Pear branch attacked by the Bark-Louse. The insect being concealed under the white scales.
Fig. 2 represents the under side of one of the scales, with the eggs adhering, greatly magnified.
Fig. 3 is a magnified view of the female bark-louse before depositing her eggs.

THE BARK-LOUSE OF THE PEAR TREE.

BY A. O. MOORE, NEW-YORK.

If in the month of October the vigilant cultivator scrutinizes his young pear trees, he may be surprised by finding here and there an individual tree strangely covered on trunk and limbs with a white substance, which at first may seem to be a mould or mildew, such as would be engendered by a damp situation. Upon attempting to scrape this off, a claret colored liquid will smear the stem as if with blood. A close examination will show that this white substance is composed of small paper like scales. See the accompanying cut *fig.* 1. If a scale is removed carefully so as to expose the under surface, it will at this season be found to cover a minute dark red object, surrounded by yet smaller dust-like atoms. This is as far in our investigation as the unaided vision will carry us. That indispensible pocket companion a good microscopic lens will, however, reveal a family composed of a mother as seen at *fig.* 3, with her numerous unhatched progeny consisting of from twenty to fifty eggs, (*fig.* 2.) the breaking of which latter furnished the red fluid before noticed.

The parent insect seems at this period to have lost all signs of activity, but a steady hand will enable us to see even as late as the month of November, slight contortive movements of the body. I have not, however, been able to discover any means of locomotion, either legs or wings. A bristle like thread proceeding from the anterior extremity, serves to attach the insect to the tree, by which it often remains suspended even when the scale covering is removed. Some authors give us a description of two kinds of scale, one covering the male, and the other the female. Previous to the first of October, I have found the insect under the scale without the eggs, but by arranging the light so as to produce a slightly transparent effect, the eggs may then be seen within the body of the parent, as at *fig.* 3.

At this time the insect appears almost lifeless, and probably it has already committed all the injury to the tree it is capable of inflicting: this injury consists, as we are informed, in the abstraction of the juices of the tree by the insertion of the insect's beak, and the accompanying wound. Around each minute paper domicil may be seen a discolored spot showing the nature of the injury. It is not unusual to see a tree of eight or ten feet in hight with every part of the stem and many of its branches whitened by this injurious insect. No tree thus attacked can be healthy. Its bark becomes rough and cracked, the young growth stunted and gnarled; the tree is frequently thrown into premature bearing while the fruit will be small, woody and flavorless; until finally the tree falls a prey to blight or an August sun deprives it of the miserable remnant of life.

Trees situated in grass lands or otherwise neglected, peculiarly invite this *sloven's pest.* Slow growing varieties of the pear are more subject to it than the rapid growing kinds. Upon my own grounds among six hundred pear trees, the Seckle only is attacked, not one of that variety having entirely escaped. Young trees are more frequently infested than those of over ten year's growth. Some writers assert that the apple is also affected by the same insect, but no such case has yet fallen under my observation. Any reader who finds upon his apple trees a Bark-Louse resembling the subject of this memoir will confer a favor by forwarding some of the affected branches to the editor of the *Agriculturist,* or to the writer at 140 Fulton-st.

It may be interesting to know that this insect is related to the Cochineal of Mexico, which forms an important article of commerce, and produces that beautiful scarlet dye so useful in manufactures.

We will now consider the means of destroying this troublesome insect. It is probable that the time in which the injury is committed, is during the Summer months, although the insect being not then invested with its paper-like covering can only be discovered with difficulty. The practice of washing the trunk and main branches of fruit trees with a mixture of soft soap and water, one part of the former to two of the latter, applied with a coarse cloth, using considerable friction at the junction of the branches with the stem, can not be too highly recommended for the health and general thriftness of the orchard. This application should be made in the Spring, before the swelling

of the buds, and again early in June, this time, however, greater care is necessary to avoid injury to the young shoots. The young insect is then about commencing its Summer depredations, and all that escaped the Spring washing may be easily destroyed. Trees thus treated will not be troubled with the Bark Louse, the following Summer, and if the application is extended to the extremities of young shoots likely to be affected by the aphis, it will be found to be a preventive for the attacks of that insect also.

Where soft soap can not be obtained, common hard soap may be used instead; half a pound dissolved in two gallons of hot water. Harris recommends a solution of two pounds of potash in seven quarts of water, or a pickle, consisting of a quart of common salt in two gallons of water. No preparation, however, I believe to be so safe and efficacious as the one first mentioned.

A piece of whale-oil soap, or even of common hard soap, mashed in the "crotch" of the principal branches, and allowed to remain until washed down gradually by the rains—and when exhausted, renewing the piece after washing the place thoroughly—will be found excellent for the general health of the tree, and prevent the attacks of this and many other insects.

GRAPE CULTURE—NO. XII.

BY WILLIAM CHORLTON.

In closing our directions for the year a few general remarks may not be out of place. Grape culture, in this country, is yet in its infancy, notwithstanding the thousands of acres already devoted to it, and I would modestly predict that in a very few years it will prove to be an important item, and that ere long we shall be exporters of wine, and thus assist our embarrassed financiers out of part of their difficulties. I have argued the importance of this matter for many years, and that our native kinds were certain to improve until they would become equal to the exotics for all purposes. How far have we progressed up to the present time? The Rebecca, a beautiful amber colored variety, that was sent out last year, is as fine flavored as a Frontignan, and if rightly manufactured, it is quite probable that as good wine will be made from the former, as the latter is famed for yielding. Diana and Delaware are but little inferior, ripening even earlier. Concord, and Hartford Prolific are hardier, and arrive at maturity earlier than the Isabella; consequently we have already the sorts to improve still farther upon and extend the area of vine growing into more northern climates. It is now high time for our Southern friends to stir themselves. They have the Scuppernongs to experiment with. At present, even the best of this class, is little more than in a wild state; whilst with care, and patience in raising seedlings from the finest fruit, a decided improvement will soon follow.

On the western slope of the Rocky Mountains, and in California, the true European grape is indigenous, flourishing well in that more temperate climate. Here is a most encouraging opportunity, and with skill in hybridizing, the result in a few generations may be equal to any yet known, to say the least.

Excepting in the most Northern, or North-western parts of the country, the pruning of the hardy kinds of out-door grapes may be proceeded with. It ought not, however, to be done during severe frost. Where the land will still admit of being worked, the upper soil should be loosened with the fork some four or five inches deep over the whole surface, after which a mulching of decayed leaves, vegetable refuse, or barn-yard manure, will more than repay the cost. On a large scale this might seem tedious, but it does not alter the case; for if good attention, and the best culture will pay on a small scale, they will be found equally remunerative in extensive culture. Depend upon it, one of the main secrets of making grape culture pay, in all the varied departments, is in enabling each vine to do its best. Never attempt more than you have capital, convenience and energy to carry out.

If the vines in the Cold Grapery have not been pruned, do it at once, after which, clean and wash with the mixture recommended in February. After this operation, prepare for covering, by bringing the vines down to a horizontal position along the line of planting. Tie the cane loosely to the nearest wire, about two or three feet from the ground level, so that when the head is brought down, this lower portion will remain in a nearly perpendicular position. Next draw the upper portion down to a level, and tie it to the wires or stakes in a horizontal position. Lay the next in like manner along side the first, and so on, until near the other end of the house, where some three or four canes will have to be reversed. They are now ready for the covering. This for young plants need be only a three inch coating of straw tied around with twine, but for older vines, that have got spurs on, it is more convenient to use long boxes made deep enough, and nailed together without a top. These inverted over the rows make a neat covering. The most effectual method, however, is to fix boards along the front of the vines, and close to them. Fill in the space thus formed along the front of the house, with dry tree leaves. The vines are thus enveloped in a good non-conducting material that will maintain a low yet even temperature through the winter. It is difficult to convince some persons that these exotics require such effectual protection, but the extreme cold of the last two winters has in part convinced them of its necessity. Throughout the winter let the house be kept cool, by opening the ventilators every clear day, and close up at night, or at all times when the weather is cloudy, and during severe frosts.

Young vines propagated and grown in pots the present year may be plunged to the rims in a box frame. Fill in over the heads with leaves or straw, and place shutters or glass sashes on the top. They may also be preserved inside a Cold Grapery, or shed. The hardy kinds, too, that have not ripened well, and are intended for replanting next Spring, will be benefitted by lifting and heeling in close together in a trench, covering the tops with earth, or a thick layer of evergreen boughs. Straw out of doors becomes saturated with the winter's rains, and is worse than useless.

In the Retarding House, where the grapes are only ripe, maintain a dry but cool atmosphere, and keep out frost by slow fires. Let the thermometer range from 45° to 50° at night, and 52° to 60° with sunshine.

GRAPES AS HOUSE PLANTS.

Somebody has recommended to cultivate dwarf grape-vines as parlor window plants; and the suggestion strikes us favorably. There are certain utilitarians who can not consent to grow anything which does not furnish food for the stomach, or money for the pocket; as for "cluttering up" their rooms with geraniums, roses and lilies, that is all folly! Now, let such persons try a grape vine at their south window. Plant in a large pot or neatly painted box, and train the vines on wires stretched across the window-frame. We can conceive that such a plant would satisfy the sense of beauty and utility at the same time, and that in a high degree. It would be the finest ornament of the house; and as for the fruit, why certainly *that* would be appreciated.

Neither believe rashly, nor reject obstinately

IMPROVING OLD ORCHARDS.

Desirable as pears, cherries and plums are, we can hardly count on very large and constant supplies of such fruit. Our climate, or soil, is so unfavorable to their growth, or they are infested with so many insects and diseases, and require so much care, that few farmers can devote sufficient attention to their culture. The apple must be our main dependence; and it is no mean dependence either. Yet, strange to say, many orchards are treated with neglect. The trunks and limbs of trees are suffered to become mossy, the tops are allowed to grow up a dense mass of brush, and the fruit to remain of an inferior quality.

Now, there are few men who can really *afford* to keep such orchards. Why not break up the ground, and if it is not thought best to let it lie fallow, then give it a coat of manure and raise some kind of hoed crop upon it. If possible, mulch the roots of each tree with old straw or chips. Once a year, at least, scrub the trunks with weak lye, or potash water, to remove the moss and rout the insects which harbor there. Then, as to pruning, there is enough to do, but it must be done in the right way. It will not answer to mount the trees with rough nailed boots, and, ax in hand, hack away like a woodsman felling a forest. Tread on the limbs carefully, so as not to start the bark. Use a fine-toothed pruning saw; thin out the branches so as to leave an open symmetrical head, and where large branches must be taken off, cover the wounds with grafting-wax, or a solution of gum-shellac. If the fruit is of inferior quality, graft in choicer sorts, beginning at the top, and grafting only one-third of the tree each year. It costs no more to raise good kinds of fruit than poor; the satisfaction and the income are ten-fold greater.

DAHLIAS FROM SEED.

Miss M. C. P., of Freeport, Ill., inquires how to propagate Dahlias from seed, and how long before they will bloom. The seed can be sown in the Spring, and small tubers will be produced the first year. These taken up in the Fall and replanted in Spring, will sometimes, though rarely, produce feeble flowers the next year. If taken up the second Autumn and again replanted in Spring, a better bloom will be produced, but three or four years is required to bring them to maturity. They are in this respect like the potato. But this plant has been materially changed by propagation—its stamens having become almost entirely changed to petals, and perfect seed is seldom produced. On this account, propagation from seed is now rarely attempted.

Again, when sown, inferior varieties are usually more numerous than good, as it sports into kinds widely different from the parent. Better leave this to amateur cultivators, who have already produced almost everything desirable in a dahlia, save a few colors which they are still striving for. Procure the roots, or potted plants, in the Spring, from seed stores or nurserymen, and you can increase the stock rapidly by separating and planting the numerous roots produced annually.

The grand error of life is, we look too far; we scale the heavens—we dig down to the centre of the earth for systems—and we forget ourselves. Truth lies before us; it is in the highway path, and the plowman treads on it with clouted shoes.

One often regrets saying too much, but seldom of saying too little.

Next to my friends, I love my enemies, for from them I first hear my faults.

THE OSIER, OR BASKET WILLOW.

As stated in a former volume, there is some doubt whether the growth of willows on a large scale can be made profitable in this country, as the lower price of labor, particularly, and longer experience, &c., enable Europeans to furnish them to us cheaper than we can produce them. Two or three individuals, having an ax to grind, but recently took pains to get up an excitement on this topic, and they succeeded in leading astray a large portion of the agricultural press. The amount of willows imported into the country was stated more than ten times too high, as we took occasion to show from the Government Custom House records. But there is no reason why willow culture should not in a few years become profitable here, and it is well to carry on some preliminary experiments. We therefore present a few hints on this topic.

The books tell us that willows have been raised for domestic use, from a remote antiquity. "The willow," says Pliny, "furnishes long props for supporting vines; and the bark may be employed for tying up the shoots; and the young shoots are much used for basket-making, and for fodder for horses, cows, oxen and sheep." In his day, they were used also for making shields. Cato ranked the willow-field next in value to the vineyard and the garden. The Germans, French and English have long grown them for making baskets, hoops, ropes, chairs, hurdles, children's carriages, cradles and toys, hampers, ladies' work-baskets, and crates. They have also been used as fodder for cattle, the young shoots being cut while green, then dried and stacked like hay. The French insist that horses fed on this food, will travel longer and better than with any other kind of nourishment. In Northern countries, such as Sweden, Norway and Lapland, the inner bark is cured and ground to mix with oatmeal, in time of scarcity. The outer bark and leaves of some varieties have astringent properties, and may be used in tanning, also in dyeing black. From one variety, (*Salix helix*,) a medicinal substance has been extracted, which, for many purposes, is as useful as Peruvian bark. One writer sees in this "a wise provision of Providence in placing remedies for agues exactly in those moist, marshy situations where these diseases are most prevalent."

We are surprised to learn that the variety of willows is so great. In the year 1650, only ten species were known in England. In 1737, nineteen sorts are mentioned. In 1819, we read of 141. Several years later, the botanists had enrolled 254! About 30 species are indigenous in England: in this country, we know not how many.

In England, they are generally grown for market on low, alluvial "finny" lands. Often, the small islands in their rivers are devoted to this use, and are called "osier holts." The traveller will notice several large plantations, in sailing up the Thames. In some establishments, a hundred men are employed in their culture, and a large number beside in manufacturing them into baskets and other useful articles.

Unfortunately, the best varieties grown in England and on the continent do not succeed well in our dry climate; and this may account for the comparatively little attention that has hitherto been given to willow-culture in this country. Recently, however, several skillful and energetic horticulturists, (in particular Mr. Charles Downing and Dr. Grant, of Newburg,) have been experimenting with other varieties, and have found three or four sorts which promise all that could be desired. These are, the *Forbes' Willow*, the *Long-leaved, triandrous Willow*, the *Purple Willow*, and the *Beveridge*. Of the old varieties, the *Salix viminalis*, is the best, and succeeds partially here.

As a general rule, the best soil for osiers is one that is deep, rich and moist, but not subject to standing water. If planted near slow running streams, look out for musk-rats, or your beautiful rods will be cut for you before the time. Fertile bottom lands that are overflown once or twice a year, are excellent. Even uplands, if heavy and retentive of moisture, will answer a good purpose, if they are worked deep. Large portions of the low prairie lands of the West would make good osier-fields, provided they were first surrounded by a belt of willow trees to shelter them from the winds. Land which is not annually overflown should be manured before the plantation is made, and then again in the course of four or five years. For the first year, especially, it should be tilled as neatly as a corn-field: it will then thrive well and make profitable returns.

Plants are obtained from cuttings, and of these, from 10,000, to 15,000, are required for an acre, according to the end to be accomplished. On this point, we can not do better than to give Mr. Downing's directions: "For large plantations, the best number is probably 12 to 15,000, and not much crop looked for until the end of the third season, when one of great value may be had. In such cases, 12,000, would be the proper number. A crop of considerable value may be had the second season; and for this purpose, perhaps 15,000 would be chosen. These should be set in rows about three feet apart, and about ten inches distant in the rows." Cuttings may vary from eight to twelve inches long; they should be cut in the Fall or the first part of Winter, and set out early in the Spring. If set in the Fall, they are apt to be thrown out by the frost and killed. The ground, however, should be prepared for their reception the Autumn before, as the soil suitable for them would be too wet to work early in Spring. The cuttings should be inserted in the ground so as to leave the top bud just level with the surface.

There is a right and a wrong way to gather the rods for market. The *wrong* way is to hack them off indiscriminately, at any distance from the surface of the ground, leaving stumps like fig. 1. The

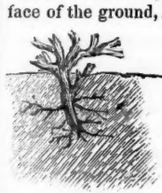


Fig. 1.

Fig. 2.

right way is to cut them off neatly, even with the surface, as in fig. 2. According to this latter method, the shoots are more uniform in size and more vigorous, the whole plant grows more erect, and the roots are healthier. This mode of cutting must be steadfastly adhered to from year to year.

AVENUES OF SHADE TREES.

After what we have so often written on the subject of shade trees, no one will question our regard for them, or our desire to see them planted widely in every part of our fair land. But there is a limit to everything; even a good thing may be overdone. For example: We lately traveled along a road where rows of shade trees were planted on each side for a distance of three or four miles. When we first entered the avenue, we were struck with admiration. What taste, what public spirit are here! But, after the first mile, shall we confess it! the scene began to pall. We hardly knew how to account for it, but at length we explained it in this way: The trees are *all* of sugar maple, uniform in size and shape, set at precisely the same distance apart, and quite near together and branching quite low. The dense shade kept the roads muddy and the air chilly, The thick branches shut out the view of the neighboring fields and hills; and the uniform size, form and color of the trees, made the scene so monotonous that we were right glad when we reached the end of the avenue and looked again upon the bright, open landscape.

From this experience we drew the lesson that shade-trees should not be planted in very long rows, or, if so planted, they should not be set too near each other, nor be of the same kind of tree, and that they should be trimmed up so as to give the traveler a view beneath the lower branches of the surrounding scenery. This would give the artificial plantation something of the freedom and variety of nature, which never tires.

EARLY SUGAR-CANE—STOWELL'S CORN.

Jer. G. Heater, of Clarion County, Penn., writes: I find the Chinese Sugar-Cane the most valuable crop I ever raised, and shall plant at least two acres next Spring. As an experiment, I tried 200 stalks at one time, and though at least one-third was left in the stalks and wasted, I obtained *four* gallons of good molasses.... One stalk of my plot ripened nearly four weeks earlier than the rest. Was there any difference in the seed? If so, this early kind is too valuable to be estimated in money....I planted 25 kernels of the Sweet Corn received from you, and gathered 75 large ears....Your *Agriculturist* has paid me ten-fold its cost, and my brother says what little he has read has been worth thirty dollars ...

Remarks.—We know of but one kind of Chinese Sugar-Cane. The African Imphee is said to ripen earlier than the Chinese, though it has not done so with us. The African has a light brown seed instead of a dark black one like the Chinese variety. Mr. H. can examine his early stalk to find whether the seed indicates a different variety. The probability is that this one stalk was hastened forward by some chance advantage of location, or manure, or both. This often happens with a corn crop. We advise to save the seed of this early stalk carefully, and plant it by itself. Any crop may be improved by continually selecting and propagating the earliest ripened seed.

NEW ROCHELLE BLACKBERRY IN WINTER.

We are informed that some persons who have planted this excellent berry north of Albany, are beginning to fear that it will not prove sufficiently hardy for their climate; it Winter-kills, they say, down to the snow line. To such persons we suggest that they go through their rows of plants this month, bend down the branches of each hill gently to the ground, and lay a stick of wood on them; or pin them down with stakes. This will keep them under the snow and save them from harm, as we happen to know from the testimony of some of our Northern friends. This noble fruit is worthy of a little trouble to carry it safely through our almost Arctic Winters.

Society, like silk, must be viewed in all its situations, or its colors will deceive us.

Polyanthus.

Crocus.

FLOWERING BULBS.

On page 230 of the October *Agriculturist* we gave a description of most of those flowering bulbs requiring Autumn planting. October and November were the appropriate months for setting them, but if omitted they may still be planted in localities where the ground is not frozen. We now introduce cuts showing the bloom of some of them, referring the reader to the descriptions already given. Our first cut represents a truss of the *Polyanthus*, which is a fibrous, rather than a bulbous rooted plant, and is of the primrose family. It is of Alpine origin, not succeeding very well in our hot climate, except in a partial shade on moderately moist ground. The flowers are in clusters of from five to ten each, on foot-stalks six to twelve inches in hight, and vary in color. Those with brown petals, a yellow eye and a delicate edging of gold are the more common shades. They form a very rich, though dwarfish bloom, in the latter part of April and first of May. Dividing the roots soon after flowering is the usual method of propagation.

The second is the *Crocus*, in appearance like a flower bud scarcely expanded. It never opens very fully, but with its lowly head of 'modest mien,' though of varied color, it wins the eye, and is usually a favorite. Clumps of different colors interspersed form an attractive sight. It is the earliest flower of Spring except the Snowdrop.

Daffodil.

Tulip.

The early flowered *Daffodil*, called also Narcissus and Jonquil, is in color white or pale yellow, and often quite fragrant. The profuse flowers and dense deep green foliage render it conspicuous and attractive.

The fourth will at once be recognized as the *Tulip*. Could the brilliant hues and delicate pencilings of its petals be here represented, as in colored prints, the effect would be much hightened. Some of these flowers are almost the hight of perfection in richness of color.

THE SENNA PLANT.

As matters of interest we propose to occasionally introduce illustrations of plants, which, though not familiar to the general reader, are yet well known by their products. There are several of these, from which we select for this number a species of the Senna plant, which belongs to the genus *Cassia*. There are three species of Senna, of which the leaves are brought to this country in large quantities: 1. Cassia *acutifolia*, which grows wild in great abundance in Upper Egypt, Nubia, and Sennaar, and is known as Alexandrian Senna. 2. Cassia *obovata*, which grows wild in Syria, Egypt and Senegambia, and has been cultivated in Italy, Spain, and the West Indies. 3. Cassia *elongata*, which grows wild in the southern parts of Arabia, and, it is said, in the interior of India, (Hindostan). The species are somewhat similar in appearance, and the dried leaves are all used for a similar purpose, that is as a cathartic medicine. Our engraving represents the last

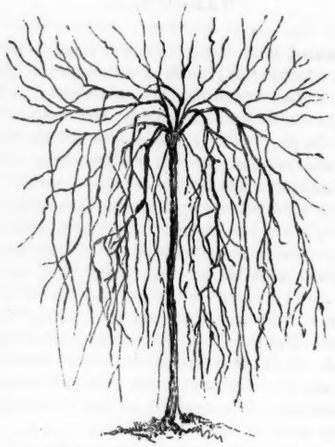
named, or Cassia *elongata*. It is a low shrub, usually but a few feet in hight. The dried leaves are well known. In the specimen above, the legumes or seed-pods are shown. These are flat, about 1½ inches long, and somewhat more than ½ inch wide.

IMPROVED SENNA TEA.

Senna tea has long been known as a prompt, efficient and very safe purgative, well adapted to fever complaints, and other cases where a decided but not violent action is desired. We well remember when, especially at the West, the coming of a physician, was an almost certain precursor of a dose of "salts and senna," following the inevitable "calomel." The salts, or some aromatic, was added to mitigate the severe griping occasioned by senna administered alone. Latterly we have learned that, by putting senna into *cold* water and allowing it to stand for some time, an extract is obtained which is equally effective as a cathartic, with the hot tea, while cold made tea is far more pleasant to take, and it does not produce any griping effect. Those who live remote from a reliable physician—if so imprudent in their diet or habits as to require "physic"—will, we think, find a cold infusion of senna one of the simplest and most effective cathartic medicines that can be used.

WEEPING TREES.

We are no special admirers of the artificially-made "weeping trees;" most of them, to our view, being awkward, distorted objects, sadly wanting in the grace and freedom of nature. But we now and then meet with specimens which greatly please us. In our own grounds, are the weeping linden, the old European weeping ash, and a variety of the weeping Scotch elm, which well deserve the room they occupy. At Rochester, and in the College Park at Clinton, in this State, we lately saw the new American weeping



willow, which excited our admiration. It is a trailing species, of native origin, grafted on an upright stock eight or ten feet from the ground. The shoots are long and slender, and of a greyish purple, and they fall from the top of the tree like the spray of a fountain. It is hardier than the common weeping willow, and, being of only moderate size, is very suitable for small yards.

It will prove an excellent and appropriate tree for planting in cemeteries. We give above a sketch of the tree taken as it appeared in Winter. Its beauty in Summer may be imagined.

Mushroom (*Agaricus campestris*).

MUSHROOMS AND TOAD-STOOLS.

To "Wisconsin Reader," we reply that it is next to impossible to describe these two plants so as to enable the inexperienced to distinguish them unerringly, unless he has once had them both together, in which case he could very readily recognize the mushroom by its delicate agreeable odor, and he would not be likely to afterwards forget the peculiar smell. The main points of difference were set forth in our article in the last *Agriculturist*, on the cultivation of the mushroom—See page 262. We present above an engraving of the general form of the mushrooms, and below is a fair representative of the Toad Stools.

Toadstool (*Agaricus ciracus*).

It will be seen that mushrooms and toad-stools both belong to the same genus (*Agaricus*). Dr

Withering enumerates 213 species of the *Agaricus*, only one of which, the *Agaricus campestris*, or mushroom, is selected for cultivating in gardens. When about half grown the *gills* of the mushroom—that is the part under the oval shaped crown—will be found loose, and of a pink or flesh color. On breaking one of these heads the savery odor will be plainly perceived, while that of the toad-stool is disagreeable. One method of testing mushrooms is to place a silver spoon in the vessel where they are being cooked. If a toad-stool chances to be present, the spoon will be colored dark, which is not the case where there are only mushrooms. It is said that a similar effect is produced upon a white onion, used instead of the silver spoon.

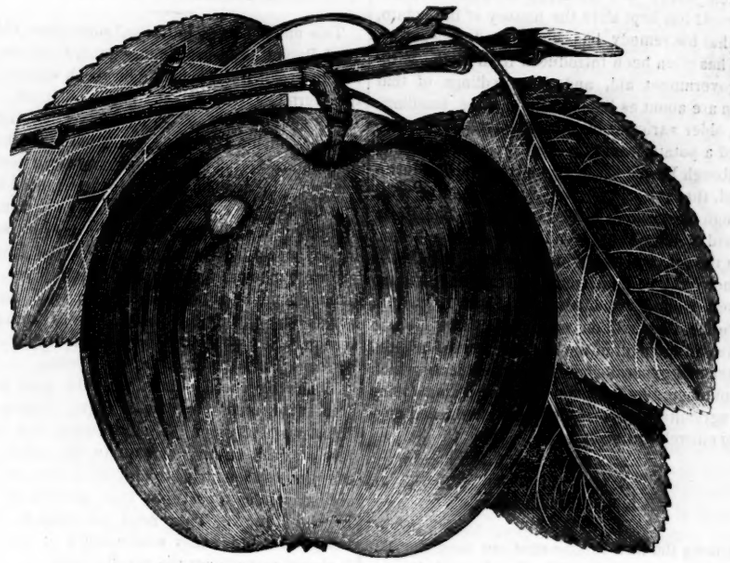
WEEDS IN GARDENS.

Nearly every garden is infested with a multitude of unnecessary weeds, and that chiefly because they are allowed to go to seed before any serious attempt is made to exterminate them. A single plant often has a hundred or more seeds with which to propagate its kind. What folly, then, to complain of weeds, if we allow them to sow themselves broadcast over our gardens! If our weeds were perennial plants, like the Canada thistle and quack-grass, the case would be different; but they are mostly annuals which need only to be kept from ripening their seeds to secure their extirpation. In China and some portions of central Europe, weeds in gardens are said to be almost unknown, simply as the result of long-continued and careful cultivation. A certain county in Pennsylvania is reputed to have rid itself of the Canada thistle, and there are gardens here and there, in our neighborhood, in which weeds are comparative strangers. Seeds, we know, will steal over from adjoining fields into the best managed gardens; but their number will be comparatively small, and the labor of keeping them in subjection not great, if none are allowed to go to seed in the garden itself.

DIBBLING.

This is the method of making a separate hole for and dropping each seed by itself. It may surprise some of our readers when we tell them that in Great Britain, and in many parts of Europe, large fields of wheat and other grains are wholly planted by this process. The ground having been prepared, a man walks backward over the field with an instrument like the one here shown, and makes the holes. He is followed by two or three children who drop the seeds, one, two or more in each hole. The Dibble is usually 1½ to 2 feet long, pointed with iron at the bottom. To regulate the depth of the holes a little cross bar is put into one of the holes near the point. Dibbling is still practiced extensively in field culture abroad, but the seed drills will soon do away with it. A dibble is, however, useful in the garden, both for putting in seeds and transplanting. A small instrument, 8 to 12 inches in length, is sufficient. They are frequently made from a shovel handle. Among other preparations for Spring work, it is well to whittle out a Dibble, and lay it aside for use when wanted.

Punch says experience is like a flannel waistcoat, that we do not think of putting on until we have caught cold.



HUBBARDSTON NONSUCH APPLE.

In pursuance of our design to describe, from time to time, the best variety of fruits, we give this month a sketch and description of one of the very best early Winter apples—the Hubbardston Nonsuch, so named from the town in Massachusetts where it originated. We hardly know its superior in beauty of appearance or deliciousness of flavor. Cole, from whose American Fruit Book the above cut is taken, describes it thus: Fruit large to very large; roundish, tapering moderately; skin smooth, fair, rich yellow ground, mostly covered with bright red, striped in the shade, generally russet around the stem, and sometimes a few large, prominent russet specks on other parts; stem medial length, rather slender, in a rather broad, deep, regular cavity; eye large, open, in a shallow basin; flesh yellowish white, tolerably fine, crisp, juicy, of a mild, pleasant, aromatic flavor, inclining to saccharine." Downing mentions a quality which is not noticed by other pomologists, and which is, in our view, one of its finest traits: "Of first quality; tree a vigorous grower, and bears very large crops; is worthy of extensive orchard culture. Flesh yellow, juicy and tender, *with an agreeable mingling of sweetness and acidity in its flavor*. October to January."

NOTES ON EARLY POTATOES.

We continue to receive inquiries on this topic, which we briefly referred to at page 267, (Nov. No.) There seems to be no first-rate variety in general cultivation.

The Early June is perhaps better known than any other variety, and is always in market, in large quantities, in its season. But this variety is not of first quality, is affected with the rot to some extent, and is not so early as some others.

The Early Sovereign is of English origin, is among the earliest and best, but is quite too small ever to be thought of for a market potato. The best early potatoes are confined to particular localities, and have not yet had time to be generally introduced.

The Carpenter Potato is well known in Eastern Connecticut, and is cultivated to a considerable extent in Rhode Island for the Providence market. It is of good quality, yellowish white skin and flesh, good size, very productive and not much affected with the rot. It can be put in market in this latitude from the twentieth of June onward, and by forcing it can be had two weeks earlier. We have cultivated it three seasons, and think it among the best for an early market variety.

Studley's Seedling originated at Claverack, on the Hudson River, and is but just introduced. It is of first-rate quality, white skin and flesh, and is very hardy and productive, though it will rot sometimes. We have cultivated it two seasons, and have a very favorable opinion of it. It is a few days later than the Carpenter.

The Dover Potato.—A correspondent inquires of this variety We have cultivated it for three years. It is said to be an old variety well known sixty years ago, and now widely distributed. It is sometimes confounded with the Danver's Seedling, a red variety, but of larger size and inferior quality. The true Dover is round, the eyes deep sunk, the skin red, the flesh of snowy whiteness, and of the first quality. It is a strong grower, very prolific, late in maturing, and all things considered, the best potato for a general crop with which we are acquainted. The only objection to it is, that it is deficient in size except in very good land. It does not appear to be so liable to rot as many other varieties.

THE POTATO ROT.

A sprightly correspondent of the New-England Farmer, propounds the following remedy for the potato rot. "By obtaining the original root as our forefather's did, and cultivating them till they became potatoes, and keeping them separate from all others, I think, that in a very few years our country would abound in a new and very flourishing generation of that vegetable. Why is it that this method has never been tried, or even recommended by your agriculturists? Is it because people have forgotten where the root grows, or because they never knew? Whilst our government are sending to all parts of the world to select plants and roots of every variety, let them call at Chili, where I understand the root was first found, and where it still grows wild, or at least it did thirty years ago, and there select a small bitter root as I understand it to be. It would be worth millions of dollars to the United States."

Where has the man lived, all his days, that he has not seen his suggestion recommended, time and again, in our agricultural journals for the

last ten years? We are happy to inform him that the world has kept alive the history of the potato, and that his remedy has been tried repeatedly. Seed has often been introduced from Chili, without government aid, and the seedlings of that origin are about as liable to the rot as seedlings from older varieties in this country. We have tested a potato from that country, so nearly like the Rough Purple Chili, that Mr. Goodrich introduced, that it could not be distinguished from it. Though of excellent quality, we were obliged to discard it after the second year. It is not free from the rot, and the vines blighted, so that it did not yield well. All similar experiments have proved failures, and we shall have to wait a while for that million of dollars. The disease baffles all the skill of the doctors, and of all the essays and experiments upon the subject, which are numbered by the hundred in our Patent Office and agricultural reports, we have never seen anything entirely satisfactory.

NEW TURNIPS.

Among the new turnips sent out from the Patent Office are, Ashcroft's Swede and River's Swedish Stubble Turnip. We have tried them both this season, and the harvest has turned out so much better than we anticipated, that we think both worthy of further trial. We received our seed from Levi Bartlett, of Warner, N. H., and followed his directions in planting them, about the middle of July. The land selected for the experiment was unpromising, the edge of a salt marsh, full of springs, and so wet that the water stood in little holes all about the surface. It was first surrounded with a ditch two feet deep, cutting off all springs from the adjoining upland. We then turned in the crop of strong sour grass, and with it a light dressing of eel grass from the shore. It was allowed to stand a few days, and was then raked off and planted in drills two feet apart.

The seed came up imperfectly, particularly those of the River's Swedish Stubble. After they were well up, the young plants were thinned and dressed with superphosphate of lime, (dissolved bones). At the second hoeing they had a light dressing of plaster. This was all the manure they received, and they were hoed but three times. They were harvested early in November, making their season three months and a half. We had ten and a half bushels from less than two square rods of land. The Ashcroft's is a purple turnip, and many of the specimens were four and five inches through, and about as smooth as if turned in a lathe. They are a very sweet, good flavored turnip for the table. The River's grows a little larger than the Ashcroft, is not quite as smooth, and is lighter colored. We have formed a high opinion of both these varieties. It will be seen that they admit of sowing near a month later than the common ruta bagas. They can come on as a second crop after early potatoes or after early cabbages and peas. This will be a great advantage to that large class of farmers, who live near good markets and wish to make the most of their land. With such fine varieties as these, we are confident that turnip culture will make progress among us.

Seed for Distribution.—We have sent to England for a bushel of seed of each of the above kinds of turnip. If we succeed in getting it, it will be offered in our Seed Distribution in small quantities.

Cover all seeds with at least their own thickness of soil, but as some of it gets washed off, you must allow for it.

PATIENCE DOCK.

This dock (*Rumex Patientia,*) sometimes called Herb Patience, deserves more general culture. It is a native of Italy, and held in much esteem, by the Germans who call it Winter Spinach. A hardy perennial of early growth its long broad leaves furnish a very good substitute for spinach, long before Spring sown plants are large enough for use. In Sweden it is extensively used with one-third part common sorrel to give it more sprightliness of flavor. The seeds may be sown in early Spring as spinach. As the Rumex grows four to six feet high with long leaves, the plants should be at least one foot apart. As the leaves bear cutting down several times during the season, when a bed is once planted it furnishes "greens" in abundance for many years.

We have secured a quantity of the seed to be distributed among our subscribers, during the Winter and Spring. We are aware that many farmers with strong aversion to the *yellow dock*, they have so long tried to eradicate, will fear they are introducing a pest into their grounds by sowing the Rumex. They need not hesitate about this plant as it is easily eradicated if at any time it should spread over too much ground.

ABOUT BEANS.

The importance of beans as a farm crop, we assume as granted: we now wish simply to notice one objection sometimes made to their cultivation, viz: that they exhaust the soil. Science declares that they impoverish land more than corn or grain crops. Here are just the words: "A product of 30 bushels of beans per acre will remove, say 490 pounds of nitrogen or flesh-forming substance, while the same quantity of wheat per acre will remove only 260 pounds; of barley, 40 bushels will remove 280 pounds; of oats the same quantity will take away 275 pounds." And then the straw of the wheat must carry off its poportion of the same element.

Why, then, it may be asked, should farmers cultivate this hurtful plant? For the same reason that they cultivate corn, or tobacco, or hops, or any other very exhausting crop: it may make large draughts on the soil and require heavy manuring to restore them, but then it *pays well.* Nor is this all: When properly cultivated, we seriously doubt whether it injures the land so much as has been supposed. Look at its large leaves; don't they show that the plant is designed to draw much of its nourishment from the atmosphere? In this respect, it is like clover, and unlike wheat and oats with small leaves. And then, many of those leaves fall and decay upon the ground, thus adding to its richness.

Look, too, at the long tap-root of the bean. It does not ramify all through the surface soil, as do the corn roots: it pierces down into the sub-soil, and then sends out its spongioles at the very bottom. It goes deeper in proportion to the thoroughness with which the soil is tilled. And this is just what we affirmed: with deep cultivation, it is doubtful whether this crop is so exhausting as is sometimes supposed.

One little "garden patch" of ours has been very profitable this season. The snails ate up the cucumbers—the chickens ate up the snails—the neighbor's cats ate up the chickens, and we are now in search of something that will eat up the cats! Can any of our agricultural friends aid us?—Alabama Planter.

The world makes us talkers, but solitude makes us thinkers.

FRUIT TREES FROM CUTTINGS.

We have often seen statements going the rounds of newspapers—sometimes introduced into a portion of the so-called agricultural press—that twigs cut from apple, pear and cherry trees if seared with a hot iron, coated with wax, or if inserted in a potato and planted in the ground, would readily take root, and orchards of any variety of fruit might easily, cheaply and speedily be raised. Our attention is called to this topic by several letters before us asking if the statements are correct. We do not so much wonder that some people should give credence to this report, when it is well known that the quince, grape, willow, &c., strike quite freely from cuttings, and reasoning from analogy one might expect the same from the pear. Such, however, is not the case, for with an occasional exception, only with a great deal of pains under glass, can the cuttings of the above named fruit trees be made to grow; and even with this treatment, the proportion is so small, and the care and labor so great, that it is far more economical to produce fruit trees, with the exception of the quince, in the ordinary manner of grafting and budding seedlings, rather than attempt to grow them from cuttings, no matter what solution they are treated to, or what vegetable they are thrust into.

NOTES AND QUERIES FROM IOWA.

Letter from a Lady—Rose Bushes from Seed—Perennials on the Prairies in Winter—Annual Flower Seeds—Ground Cherry and Ground Apple—Wild Prairie Flowers—An opening for an Eastern Florist—Early Frosts—Chinese Sugar Cane successful—&c.

To the Editor of the American Agriculturist:

Your invaluable paper comes to us every month, and we learn many useful things from its pages. Wishing, however, to know more of some things, I take the liberty to write you. First, I would inquire of *roses*, how to raise the bushes from seed. Will seeds vegetate, if a year old or more? Will those grown from seed be like the original? What soils are best for roses?

It is thought by many, that perennials, such as pinks and bulbous roots, can not be kept here unless taken up in the Fall. A neighbor who has lived in Illinois, says she tried it five or six Winters, and lost the pinks every time. She thinks the soil of the prairie is not dry enough for them. I have quite an assortment of late annuals, but would like some that blossom before August. Where can such seeds be obtained?

Much is said this season of the "Ground Cherry." It grows wild here. The fruit known by that name, is yellow and has a five-sided husk. Two other kinds resemble it somewhat—one called the "Ground Apple," a little larger than the cherry, and red when ripe, with a round colored husk, the other, still larger, purple, and called the "Southern Tomato." I will try to send you a sample of each.

Many plants grow wild here that are only found in gardens, where I lived at the East, (Oswego Co., N. Y.) The trumpet-honeysuckle, (*Lonicera,*) clambers over the oak, almost equal to the wild grape. Spider-wort, (*Tradescantia,*) shows its beautiful blue flowers, almost everywhere. Our garden was well furnished with wild violets, columbine and sunflower, and a dozen others that are new to me. To tell you of the prairie flowers would be an old story. If they can be cultivated East, some gardener might make his fortune.

This has been an excellent season for crops

Any quantity of wheat can be had at 50 cents per bushel, and potatoes 25 cents. Potatoes are not quite as good as usual on account of rains in August, but everything is plenty except *money*. The effects of the great "*Panic*" are felt here a little, and will, probably, be more so during the Winter.

Can you tell me who publishes a list of seeds, annual and perennial, with prices, time of flowering, &c.? The article in the October number, on "Bulbous Roots," pleases me much, and I must send by some merchants to get some, but I would like a list to choose from.

The first frost came on the morning of Sept. 30th, heavy enough to "nip" the gardens and loosen the butternuts.

I had almost forgotten to mention the Syrup made from the Chinese-Cane, and exhibited at our Fair. A few miles from here a farmer has made several barrels, and says one may sell at 30 cents per gallon, and then make money by it. The lowest price for common molasses has been $1 25 per gallon, and hardly fit for use at that. The new kind is excellent.

MRS. L. A. MITTS.

REMARKS.—Rose bushes are not often raised from seed, as it is a slow process, and there is no certainty of producing desirable kinds. They are usually propagated by divisions of the root, layers and cuttings. A sandy loam is perhaps the best soil for them, although they flourish well on rich gravel lands—in fact they will grow on almost any soil.

Perennials and bulbous roots should succeed even in the northern part of Iowa. A moderate covering of leaves, or evergreen brush will cause them to start earlier in the Spring. If the soil is wet, either drain or trench it, or raise the bed a little above the surrounding surface. We are confident with this preparation and a moderate covering during the Winter they will succeed. A. Bridgeman and J. M. Thorburn & Co., seedsmen of this city, publish descriptive catalogues which they mail to applicants upon the receipt of a stamp to pay postage. Flower seeds are often mailed to long distances.

AN HOUR'S STRUGGLE WITH POISON.

I was spending some days, not many years ago, in a beautiful little country village, and in a family that had more than common attractions to one who loves domestic life as well as myself. The little circle had in it more of real interest than I have often seen developed in the same number of persons.

The father of the family—almost too young to feel yet that he was entitled to that honorable appellation—was a fine, frankhearted young mechanic, with a wide world of bounding life in his veins, and energy that, when fully aroused, drove everything before him, and a warmth of disposition that won him more friendship than it had then given him of the goods of this world.

His wife, to whom he had been married some four years, was singularly beautiful. They had two children—the one a laughing brown-eyed and brown-haired little fairy of three years. Her name was Eveleen. The second was a crowing, laughing, blue-eyed, plump little beauty of less than a year, promising to have all the charms of the older at her age.

I was sitting one afternoon in a quiet little room, with my feet upon two chairs, reading a pleasant little book, in a state between asleep and awake—my host away at his shop, a hundred yards off, and my hostess engaged in her household labors—when I was thrown out of my indolence by a scream that brought me to my feet like an electric shock. It was a woman's voice, and had in it an excess of agony that cannot be indicated in words, so loud that it rang over that quiet little village, and brought every one forth to ascertain the cause.

I sprang to the door that separated the sitting-room from the dining apartments, and saw the whole at a glance. The young mother stood at the door with her first-born—our darling Eveleen—in her arms dying. A brief and hurried word from the servant told me the sad story. The little girl had accompanied a child-uncle up stairs, and while the attention of the older child was for a moment turned away, she seized a bottle of corrosive sublimate in alcohol, prepared for bug poison, and swallowed enough to take away twenty such lives.

The little thing had tottered down stairs, and the mother had met her at the landing with the empty bottle in her hand, and the poison oozing from her mouth, and the child all unconscious of the fearful thing she had done. Was it any wonder that a fearful shriek rang out over the quiet village, and that already the occupants of every house near were rushing toward the spot where the mother stood.

But a few moments could possibly have elapsed since the poison was taken, and yet the effect was already fearful. After the first shriek of terror, the mother had quieted to a calm despair for the moment, and stood with the child in her arms, making no effort for its relief; and indeed it seemed hopeless, for already the subtle poison seemed diffused through the frame; the brown eyes had lost their lustre, the face was blackened as in after death, and the teeth were tight set in a convulsive spasm that evidently would not pass away. I examined the little lost darling for a moment, saw that it was hopeless, and then turned away, unable to bear that mother's agony. The little door was already half filled with villagers, and sobs, and moans, and lamentations over the fate of the dying child were heard in every direction, mingled with quick and hurried questions as to the manner of its occurrence, and vain attempts at answering, which added an oppressiag confusion to the sadness of the scene.

The little play-fellow's uncle, who had been up stairs with the child, had run instantly to call the father, and but a few moments elapsed before he sprang into the middle of the group. He had been told all, and asked no questions. I had time to remark that his eye was very stern and that his lip was very firmly compressed. Others, too, remarked it, and I knew afterwards that a murmur ran round the circle of how strange it was that he betrayed no feeling.

He reached out his hands, and took the child from its mother. Its eyes were now closed, and a white ooze coming from between the blackened lips. Was ever death more assured? I saw him open the eyelids, and heard him give a sigh of relief. He told me afterwards that the eye was not shrunken, and so death had not begun. He then attempted to open her mouth, but the teeth were tight set, and they resisted his efforts. But with a force that seemed almost brutal he wrenched the teeth apart, and opened the mouth.

"Shame," cried one of the bystanders.

The father did not heed them, but motioned to a neighbor to take the child in his arms. He did so.

"Bring me the egg basket," he spoke very sternly, almost without opening his teeth, to the servant.

"What do you want of it?" "What can you do with it?" "He's crazy!" and many such remarks followed, but the basket was there in a moment.

He seized one of the eggs, broke it, inserted his fingers again between the teeth and wrenched them open by force, though they shut with so convulsive a motion as to tear the flesh from his fingers, and poured the albumen (white portion of the egg) into the throat. There was a slight strangle, nothing more, and the spectators were horrified at the action.

"Don't, the child is dying!" cried one.

"Please don't hurt the little thing—it can't live!" the mother found voice to say, laying her hand upon his arm.

"Mary, be still!" he answered sternly, while his teeth were relaxing from their clenching, and his face as hard as if he was entering a battle; "and don't any of you meddle with me, keep off."

The bystanders involuntarily obeyed, with many harsh remarks upon his cruelty—but he did not heed them, and went on. Another and another egg was broken, and still there was no sign of life. Then the whole body of bystanders broke out into a loud murmur, and cries of "brute!" "Let the child die in peace!" "He is crazy—take the child away from him!" were heard around him.

He disisted for a moment from his efforts, and turned with a fierceness which had before been altogether foreign to his nature—but no one who saw him afterwards forgot it. "Fools," he hissed, "mind your own business, and leave me to mine? Take her away will you! Try it!" and he went on emptying egg after egg down the apparently lifeless throat.

The mother could stand this no longer. Her first-born was being tortured to death before her eyes in its death, and she imploringly flung herself on her knees before her husband's father, who had at that moment arrived.

"O, father, do stop him," she gasped—"He is torturing that poor dying child."

The grandfather started forward a step to interfere, for he, too, thought the proceeding an outragous one; but he stopped and said, "Mary let let him alone. The child will die if he does not go on. It cannot do more than die if he does. I would not say a word to him for the world."

There was a silence then. In a moment there was a quiver of the eye-lids, a convulsive movement of the chest, the teeth lost their tension. The father seized his child, turned her face downward, and the poison began to flow from her mouth. Again and again, as the retching ceased, he repeated the experiment—the life returning still more, and the face losing its blank color every instant. More than twenty times had albumen been administered, and more than half those times followed by the expulsion of the poison, when the eyes opened, the father desisted, the little sufferer lay just alive in his arms, exhausted, its little life terribly shattered, but saved.

Then—when the necessity for exertion and determination was over—when the physician had been summoned, and they knew that darling little Eveleen might live, after many weeks of struggle between life and death; when the relieved friends had acknowledged that they had wronged him first; when the beautiful and sorrowful wife had blessed him through her kisses and tears; and all knew that under God only such an almost fierce determination could have saved the child—then the father sat down unnerved, and wept like a child.

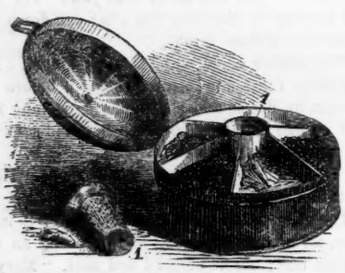
Not as in "Little Sister Evelyn" did the poison do fearful office. Eveleen is alive to-day, and her brown eyes are opened upon a womanhood. But there is no hour in my life that brings so thrilling a recollection as that of the young father's struggle for the life of his child.

IN DOOR WORK.

NOTE TO OUR LADY READERS.

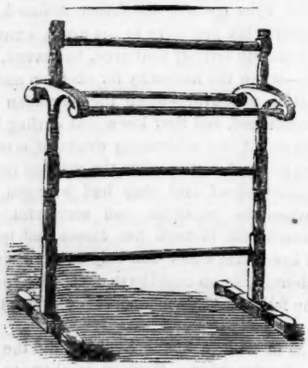
As intimated in our last number, we shall during the progress of our next Volume devote an increased degree of attention to the department of In-door labor. There are very many practical hints to be derived from simple philosophical principles, which add greatly to the pleasure and interest of household work, while promoting and assisting in the performance of the daily drudgery of female cares. Among the topics to be thus discussed, we may name: preparation and adaptability of various kinds of food, baking, cooking, cleansing, coloring, clothing, ventilation, &c. These principles we hope to take up and elucidate in a series of chapters adapted to the comprehension of all. We propose also to introduce a variety of illustrations of useful implements.

We respectfully solicit from our lady readers, hints, suggestions, drawings of new articles of furniture, convenient house-keeping articles; also any improvements in modes of cooking, &c, We shall now have abundance of room to devote not only to the out-door, but also to the in-door labor of rural life. The space allotted to this department is necessarily curtailed in the present number, by the Index and the extended reports upon the new sugar cane.



A CONVENIENT SPICE BOX.

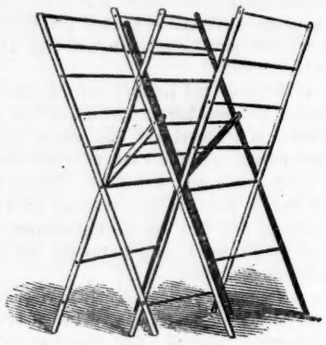
The above illustration represents a very convenient spice box, which we have not noticed in many families, nor have we seen one of this form on sale in house-furnishing stores. We have, therefore, made an engraving of it, which is so plain as to require little explanation. The box may be made square, six or eight-sided, or round as here shown. It may be of wood, or plain or jappaned tin, or of other material. Any tin-worker could make one. The various spices are kept in the several divisions, while the grater (1) fits into the center.



TOWEL BARS.

This is so common a piece of furniture as to need no description. We present the above only as a good *pattern* which anybody can take to a cabinet-maker to be imitated. It will be noticed that two of the bars are outside of the center, which allows of several towels being dried at a time without their hanging together. We have a different pattern which we like still better for common use, but could not show its construction by an engraving. It is somewhat similar to the folding clothes-dryer described below, but on a smaller scale.

FOLDING FURNITURE.

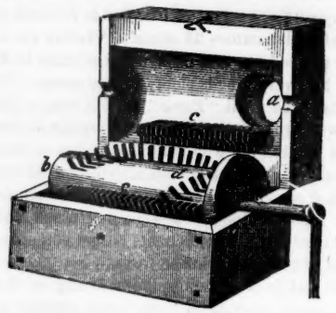


Clothes-dryer Open.

In our visit to the recent Exhibition of the American Institute at the Crystal Palace, we saw nothing which pleased us more than a lot of Cram's folding chairs, tables, bedsteads, settees, clothes-dryers, &c. Almost every variety of house-furniture seemed to be constructed for folding together and packing into the smallest possible space. Above is an example of one of the simplest. When spread out it occupies about as much space as four chairs set together, and yet affords hanging room equivalent to a clothes-line 80 feet in length; that is, there are 20 rods, each 4 feet in length, no one of which is directly under another. In the side cut is the same implement folded together, so as to occupy little more space than a short ladder. They are made of various sizes, giving from 15 to 160 feet of drying surface, and cost at retail from 60 cents to $6 00. With an arrangement like this, which could be stored in a corner when not wanted, the housewife would be almost independent of the weather on washing days, while the cost is little more than that of clothes lines enough to wear as long as one of the folding dryers. Considering the advantages of being able to wash when one wishes to, and not having to bring in, rinse and carry out the clothes if a storm chances upon washing days, and also the saving of wear upon garments hanging in the wind, we must put this down as an economical "labor-saving" implement.

Clothes-dryer closed.

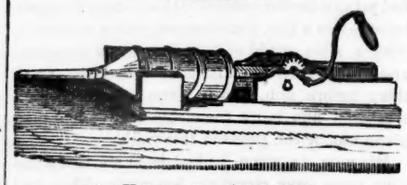
No man ruins his health without bringing the consequences down upon himself. Like Samson, he destroys the temple, and buries himself in the ruins.



SAUSAGE AND "HASH" CUTTER.

How many wearisome hours are passed hammering away with the inevitable bowl and chopping knife, from week to week, and month to month—not to mention the days required at the sausage making season. There is no better food than *finely chopped* hash, but how many good housewives are absolutely compelled to forego the pleasure of serving it up, simply for want of the time and strength required to prepare it. This labor may be greatly lessened by the use of a simple, cheap implement, like the one shown above. It consists of a plain box, in which a series of knives, *c*, *c*, are set near each other, between which play the square iron pins, *d*, fastened into a roller, *b*. When the cover is shut down, the meat, or meat and potatoes for hash, are dropped through the opening, *a*. The spiral motion of the teeth moves the materials along gradually, and they are finally dropped out of a hole in the bottom at the other end of the machine. The discharging opening is under *b*.

The boxes are made of both wood and iron, and cost at retail from $2 to $9, according to the size—the latter price being for large machines used at sausage manufactories. Those having two rows of knives, one row on each side of the box, and costing $3½ to $4½ are perhaps the cheapest, in the long run, for family use. To say nothing of the saving of labor, it may be added that such a machine would contribute to the health of children, and grown up fast eaters particularly, since such persons usually "bolt" food in a state wholly unfit for the slow digestion or dissolving process carried on in the stomach. If people will not masticate their food with the instruments nature has provided, it is certainly desirable that machinery should be used for the purpose, rather than that they should tax their digestive organs with large pieces of meat, which lie for hours as an *irritating* poultice, before they can be entirely worked up by even the strongest stomach.



SAUSAGE FILLER.

"Stuffing Sausages" is hard work for the "chest," as every one knows who has tried it for a few hours. Our engraving shows the construction of a cheap and effective machine for accomplishing this work easily and rapidly. It differs little, in general form, from the old-fashioned implement. The tin cylinder is made of large size, and rests near the center upon two pivots or ears. It is lifted out, or tipped up, when putting in the meat. The handle of the follower is fitted with cogs, and is carried forwards and backwards by

cog-wheel turned with a crank, and it is moved with great force by a little power applied to the handle. They are sold at $1 75 and upward, according to the size. Where a considerable supply of sausages is made in a family, one of these implements will be found both convenient and economical.

POISON ANTIDOTES.

Every one should be fully aware of the best remedies for some of the more common poisons, so as to be ready to *act at once* in any emergency. We will name some of these remedies—only one or two at a time, that each one may become fixed in the mind. Read the thrilling sketch on page 203, and you will never forget what antidote to give for *Corrosive Sublimate*—rather, we think, you will never leave that "bug poison" where a child can possibly get to it. It is better to administer albumen (white of eggs) beat up with a little water, but no delay must be allowed. The only hope of counteracting this deadly poison lies in prompt action. If eggs are not on hand at once, give large and repeated doses of flour mixed with water, or better with sweet milk. Milk itself is a partial, if not complete antidote for corrosive sublimate.

Arsenic.—The best antidote for this poison is a chemical substance called *Hydrated Peroxide of Iron*, freshly prepared, which can only be obtained of a druggist. But do not wait for this. While it is being sent for, and at the first moment after discovering that arsenic has been taken, pour down dose after dose of water slightly warmed, promoting vomiting by thrusting the finger or a feather down the throat. Keep up this until the stomach has been literally washed out, at least a dozen times. A friend of ours took a teaspoonful of arsenic in mistake for cream of tartar, but discovering his error soon after, he ran to the stove and commenced drinking all he could pour down of lukewarm dish water, which happened to be there. As fast as this was thrown up he took another dose, and in this way actually swallowed and vomited half a pail full of water. He recovered without any other remedy. This treatment is good for most kinds of poison if adopted soon enough.

BEST THING FOR BURNS.

It may be put down as a settled fact that the very best application for all kinds of burns and scalds is an immediate application of dry *wheat flour*. It is without controversy better than any and all of the "healing salves," turpentines, oils, "pain-killers," &c., that can be named. We speak positively on this point, because it is one decided by the best physicians, and we have had abundant practical proofs of its efficacy.

Heat disorganizes the flesh, deadens the cuticle or outer skin, and admits air which is irritating. A good coating of flour, shuts out the air, soothes the irritation, and dries up the fluids thrown out. Do not imagine that "something healing" must be applied. Not all the salves in the world can mend broken flesh. You can stick together broken glass, or wood, with wax or glue. You can weld together severed iron, but no such treatment is applicable to flesh disorganized, cut or burned away. Nature, so to speak, has a way of her own, and only one way to repair a breach in the flesh. *The healing material comes from within.* If the hand be cut, bring the severed parts together, hold them there steadily, cover up the part from the air and from external injury and the healing will go on so long as there is no disturbance. If from curiosity, or anxiety, or other cause you disturb the half formed new flesh, a sore will be the consequence.

We repeat, for all kinds of burns or scalds, however severe, put on *only* a thick coat of flour. If a hard crusty mass be formed so as to produce irritation, after a day or two wash off the surface carefully with blood-warm water, dry partially, and put on more flour, but never disturb the actual surface of the sore until, when entirely healed, the scab falls off of its own accord. Our word for it, this treatment will best promote the cure of burns. But a short time since a child upset a dish of boiling water into its bosom, producing a fearful scald upon the whole front of its body. The mother, chanced to be a reader of the *Agriculturist*, and noted our remarks on this topic some two years ago. She immediately applied flour and flour only, binding it on with a cloth loosely so as not to produce irritation. The child was soon soothed, and in a very few weeks was entirely healed, with scarcely a scar remaining. This is but one of many similar instances that have come to our knowledge from time to time.

BAKING BEETS.

A correspondent, who has traveled in Italy, says that one of the interesting novelties in that country was "Baked Beets," carried hot from the ovens and sold in the streets at almost all hours of the day. He tried them as a matter of curiosity, at first, and found them very delicious when eaten with butter, salt and pepper. Thousands buy and eat them thus, and, not unfrequently, make up an entire meal in this way. This is not new to us. In Volume XIII., page 117, we recommended baking beets, and we can assure all who will adopt this mode that they will find it much superior to boiling, as baking renders them much more tender, sweet and juicy.

OUR BASKET

Into which are thrown all sorts of paragraphs—such as NOTES *and* REPLIES *to* CORRESPONDENTS, *with Useful or Interesting Extracts from their Letters, together with Gleanings of various kinds from various sources.*

TO CORRESPONDENTS.—More than a page of interesting "Basket Matter," has been crowded out of this number by the Index, &c. This could not be helped—a peck measure can not be made to hold a bushel by any process we know of. But we shall have the *bushel* measure itself during the next eleven months.

Spring and Fall Transplanting.—P. L. S. Peach, Cherry and Dwarf Pear trees, are transplanted with more safety in Spring than in Autumn. Strawberries may be transplanted at almost all times from April to October inclusive, except at the bearing season in June and July. The best times are, as soon as the ground is settled in April or May, and in August or September, when the runners are rooted sufficiently to be taken up.

Shade Trees.—These as well as fruit trees may very properly be set out in the Fall. We prefer Spring for planting Evergreens. See under Orchard and Nursery and the Lawn, page 243 of the November number, also, "Choice Ornamental Trees," on page 258.

Grafting Peach Trees.—"Subscriber," at Shirleysburg, Pa. Peaches can be grafted, but budding is safer and preferable on many acconnts.

Covering Raspberries.—J. C. Jackson, New-Castle Co, Delaware. We think there will be no necessity for covering raspberries in your latitude, unless more tender varieties than the Antwerp, Fastolf or Brinkle's Orange. We protect these kinds here, by bending them down carefully and putting on two or three inches of soil.

Tar around Trees, and Raising Evergreens.—S. S. Wiest, Lancaster Co., Pa. Tar applied to trees may prevent mice from girdling them, but it stops the pores and injures the trees. It may be put on paper or cloth and wound on loosely, if desired. Raising evergreens from seed was treated of at length on page 13 of this volume, January No., and chapters on evergreen trees and shrubs can be found at pages 108-9, May No. Further information will be given in the next volume.

Grape and Blackberry Cuttings.—H. A. W., New-York. Grape cuttings may be made as soon as the frost has killed the foliage, say from the middle of October to the middle of December. Blackberries and raspberries are propagated by suckers from the roots rather than by cuttings. The roots themselves are sometimes cut up and planted when the largest possible numbers are wanted from a few plants. One to one and a half feet in length is sufficient for the grape cutting. Leave but a few inches out of ground when planting in Spring. It is not necessary that the earth come in contact with every part of each cutting when buried for the Winter, although a bank should be raised over the whole.

Strawberry Plants by Mail.—J. M. Weaver, Henry Co., Tenn. Small plants may be forwarded by mail, but they need to be cramped so much and put up with moss, or damp packing, and are subject to so much hard usage in mail bags, that it is safer, and in the end cheaper to send all live plants by express.

King Philip Corn is *brown* or dark yellow. If S. H. J., of Mich., has it of a light yellow, it must have hybridized with some other kind growing near.

King Philip Corn.—T. R. J., and others. We shall probably have this in abundance for distribution next Winter, if it is desired. Have none ready now.

American Ivy and Dahlias.—Mrs. C. Stanley, Jefferson, Mich. The American Ivy, (Virginia Creeper,) is propagated from the root. A plant obtained at the nurseries costs about 25 cents. Dahlias are raised from the bulbs rather than from seed, as referred to elsewhere.

Sugar Cane Seed Wanted.—F. A. Bissell, Tolland Co., Conn. There will be plenty of this seed on sale, during the Winter, by different dealers. It is too early to have the market price fixed as yet. Great care will be needed in the selection. We already hear of spurious seed—mixed with Doura Corn.

Peanuts.—Thanks to J. H. P., for drawing—in engraver's hands.

Onions and Parsneps.—Our queriest will find directions for raising the former on pages 57, 91 and 183 of this volume. Good parsneps can not be raised from the seed of wild varieties.

Drying Pumpkins.—P. L. S., and others. See page 266.

Books on Draining and Cranberry Culture.—Jas. Leslie, Toronto. The only American books on these topics are Munn's Land Drainer, price 50 cents, and Eastwood's Cranberry Manuel, price 50 cents. Draining has been pretty fully discussed in this volume of the *Agriculturist*, of which the back numbers can be supplied, as noted elsewhere.

Poudrette, Tafeu, &c.—Robt. Wash, Albany County, N. Y. These are French and Chinese names for night soil, (human excrements.) The articles, sold under these names, are prepared from the materials removed from the privy vaults in our cities, by mixing with dried muck, peat, charcoal dust, plaster, &c. If well made, that is, not too much diluted with the muck or other absorbents, they are undoubtedly good fertilizers. The good or bad quality depends entirely upon the honesty and good management of the manufacturers.

Pianos.—Miss C. P., of Buchanan Co., Missouri. We should be very glad to comply with your request to select a piano in this city, without the generous commission offered, but, though a lover of music, we do not consider ourselves a good judge of any musical instrument except the *human* one. Miss P. will find in our advertising columns the business card of Boardman, Gray & Co., whose pianos are in high repute the country over.

Barberries.—To "Michigander." These grow in a wild state,—abundantly in Massachusetts and Rhode Island. They are also found in some parts of New-York and Connecticut, and elsewhere. They are usually increased in numbers by dividing the roots, but may be raised from seed.

Osier Willows for Hedges.—T. Pomeroy, of Onondaga Co., N. Y., writes that he has 50 rods of Osier hedge, which bids fair to be successful. He wishes the results of others with this plant.

Pumpkins, Lima Beans, &c.—T. T. Hawks of York Co., Maine, writes as follows: I planted thirty pumpkin seeds about the 20th of May, on old pasture land newly broken up, and manured them lightly. After they commenced running, I pinched the ends off the vines as suggested in the *Agriculturist*, when they sent out side shoots, and I now have some 75 ripe pumpkins weighing from fifteen to forty pounds apiece.

I also planted a few Lima Beans, May 23d, and now have vines 24 feet high, with ripe clusters of pods 15 feet from the ground.

Condensed Reports of Experiments with the Chinese Sugar Cane.

Name of Experimenter.	State.	County.	Latitude	Soil.	Manure.	Planted at about	Headed out about	Height at time of heading.	About the time of ripening.	Height at time of ripen'g	Diam'r 1 foot fm ground.
1. Wm. Wanzer	Conn.	Litchfield	41½°	Sandy loam	None	May 25	Sept. 1	9 feet	Killed Sept. 30	12 feet	1 inch
2. Wm. Crocker	N. Y.	Erie	43 °	Sandy loam	Plaster	May 20	Sept. 24	7 "	Killed Oct. 1		
3. Thomas R. Joynes, jr.	Va.	Accomac	38 °	Sandy loam	None	April 7	Aug 15	10 "	Ripe Sept. 15	14 "	1½ "
4. William J. Tracy	R. I.	Providence	41½°	Light sandy loam	Hog-yard	May 20	Aug. 30		Killed Sept. 29	8½ "	¾ "
5. Howard Williamson	Pa.	Chester	40 °	Slate, subsoil porous	None	May 9		10 "	Ripe Oct. 15	12 "	1 "
6. Hubert Greaves	Ohio.	Sandusky	41½°	Rich, black, stiff loam	None	June 15	Sept. 12	12 "		13 "	2 "
7. William Chase	R. I.	Providence	41½°	Sandy loam	Stable	May 15	Aug. 31	12 "	Ripe Oct. 15	13 "	1 "
8. A. W. Russell	N. Y.	St. Lawrence	44½°	Sandy	Barn-yard & leach'd ashes	May 29	Oct. 5	8½ "			1½ "
9. J. Selden, by John Hall	Pa.	Pike	41½°	Sandy gravel	Sod—leached ashes in hill	June 5	Sept. 17		Killed Sept. 29	10 "	1½ "
10. J. Selden, by P. Grimes	Pa.	Pike	41½°	Damp loam, shelly sandstone	None—old garden	June 1	Sept. 18		Killed Sept. 29	10½ "	1½ "
11. Daniel Colklesser	M ..	Washington	39½°	Sand, rubbage, &c., well rotted	None	May 15	Aug. 15		Ripe Sept. 25	12½ "	1½ "
12. Alfred H. Brown	Mass.	Worcester	42½°	Rich garden loam	½ stable, ½ ashes & plaster	May 26	Sept. 20	5½ "	Killed Sept. 30		¾ "
13. C. P. Vancil	Ill.	Sangamon	40 °	Black loam	None	May 16		10 "	Ripe Sept. 14	11 "	1½ "
14. S. Sayer	Ohio.	Cochocton	49½°	Sandy loam	A little barn-yard	May 15		10 "	Ripe Sept, 15	12 "	1½ "
15. Dr. S. S. Keene	R. I.	Providence	42 °	Clay loam	Barn-yard						
16. John A. Bunce	Wis.	Juneau	43½°	Sandy loam	None—new land	May 22	Sept. 6	10 "	Cut Sept, 29	11 "	1½ "
17. R. Cramer	Ill.	Mercer	41½°	Sandy loam	None	May 27			Oct. 12.	12 "	1½ "
18. A. B. Price	Ind.	Porter	41½°	Sandy loam, rich prairie	None	May 23		9 "	Ripe Oct. 15	11 "	
19. O. M. Colkins	Ind.	Spencer	38 °	Sandy loam	None—an old fence row	May 12	Aug. 28	11½ "	Ripe Sept. 24	14½ "	1½ "
20. S. C. Pruden	Iowa.	Van Buren	40½°	Prairie loam		M. 1–J. 1			Ripe Oct. 12	12½ "	1½ "
21. John Fraizer	Ohio.	Clinton	39½°	Clay bank	Old barn used to stand	June 14		10 "	Ripe Sept. 20	15 "	1½ "
22. S. M. Berry	Ky.	Scott	38 °	Clay soil	None	April 30	Aug. 10		Ripe Oct. 1	14 "	1½ "
23. Wm. Kerr	Ohio.	Brown	39 °	Light sandy soil	None	May 15	Sept. 15		Ripe Oct. 1	12 "	
24. Z. Beesan	Ind.	White	41½°	Sandy loam	None	May 20	Sept. 1	11 "	Ripe Oct. 15	14 "	1½ "
25. S. Williams	N. Y.	Seneca	43½°	Clay		May 10	Aug. 24		Killed Oct. 15	13 "	1½ "
26. Alfred S. Whidden	N. H.	Strafford	43½°	Good garden	None	May 15	Sept. 15	12 "	Killed Oct. 5		1½ "
27. Hiram Wilson	C. W.		43 °	Light sandy loam	Slightly	May 20	Sept. 1			12 "	1½ "
28. John Crapo	Iowa	Benton	42½°	Dark sand and gravel	Coarse stable	May 18	Sept. 1	11½ "	Ripe Oct. 16	13½ "	1½ "
29. Thaddeus Pomeroy	N. Y.	Onondaga	42½°	Sand loam		June 1			Cut Oct. 14	14 "	1½ "
30. S. S. Moser	Ohio.	Trumbull	41½°	Black loam	None	May 25	Sept. 15	9 "	Ripe Oct. 30	11 "	1½ "
31. G. Engle & Co	Pa.	Beaver	40½°	Clay loam	Compost and leaf mold	May 20			Ripe Oct. 19	10 "	1½ "
32. Geo. W. Willson	Ill.	Cook	41½°	Clay, with a little black loam	None	June 8	Sept. 10	9 "	Blo'n d'n O. 15	11 "	1 "
33. L. Eastwood	Ohio.	Lucas	41½°	Sandy loam	None	May 27	Sept. 6	10 "	Ripe Oct. 15	14 "	1½ "
34. J. S. Woodward	N. Y.	Niagara	43 °	Coarse gravel	Barn-yard	May 28	Sept. 15	10 "	Ripe Oct. 15	13 "	1½ "
35. Frederic P. Bissell	Conn	Tolland	41½°	Sandy loam	None	May 25	Sept. 10	12 "		14 "	1 "
36. Samuel S. Thompson	N. J.	Salem	39½°	Sandy loam	A little barn-yard	May 7	Aug. 15	9 "	Ripe Sept. 15	12 "	1½ "
37. S. H. Jenks	Mich.	Ionia	43 °	Sandy gravel	None	May 26	Sept. 1	9 "	Killed Oct. 2	11 "	1½ "
38. S. W. Martin	N. Y.	Allegany	42½°	Sandy loam	Poultry Droppings	May 26	Sept. 12			12 "	
39. T. Cather	Va.	Taylor	39½°			May 23		10 "	Ripe Oct. 22	12 "	
40. A. G. Weed	Iowa.	Howard	43½°	Good prairie	None	May 19	Sept. 15	10 "	Killed Sept. 28		
41. Joseph Troth	Iowa	Linn	42 °	Sandy	None	May 10			Ripe Oct. 4	13 "	1½ "
42. J. N. Weaver	Tenn	Henry	36½°	Clay loam	Barn yard	May 10	Aug. 15	9 "	Ripe Sept. 18	13 "	1½ "
43. James Pott	Pa.	Fulton	40 °	Slate soil	None	May 15			Ripe Sept. 30	12 "	1½ "
44. H. G. Huling	Ill.	Lasalle	41½°	Black loam	None	May 21	Sept. 1	9 "	Ripe Oct. 10	11 "	1 "
45. Almond Foster	Ind.	Lake	41½°	Black sandy loam		June 1					
46. J. B. Hungerford	Ohio	Lake	41½°	Clay loam	Barn-yard	May 26			Killed Oct. 20	10 "	1 "
47. Milton Stebbins	Mass.	Hamden	42 °	Sandy	Barn-yard	May 15		10 "	Killed Sept. 29	12 "	1½ "
48. John Dexter	Conn	Windham	41½°	Sandy loam	None	May 13	Sept. 0	10 "	Killed Sept. 29	11 "	1 "
49. J. L. Stevens	Me.	Hancock	44½°	Good garden	Old barn-yard	May 16	Sept. 15	9 "	Killed Oct. 22	9½ "	1 "
50. John Brown	Ind.	Harrison	38½°	Sandy loam	Barn-yard	May 15	Aug. 15	10 "	Ripe Sept. 20	13 "	1½ "
51. A. McClelland	Ohio.	Holmes	40½°	Clay loam	None	May 21			Killed Oct. 19	12 "	1½ "
52. Charles M. Keep	Mich	Calhoun	42½°	Clay loam	Stable manure and ashes	May 23	Sept. 5	9 "	Ripe Oct 18	11 "	
53. E. W. White	N. Y.	St. Lawrence	44½°	Garden loam	Barn-yard	May 25	Aug. 25	10 "	Ripe Oct. 31	13 "	1½ "
54. H. G. Ainsworth	Ill.	McLean	40½°	Sandy loam		May 25	Aug. 20	10 "	Ripe Sept. 25	13 "	2 "
55. D. B. Simmons	Ohio.	Medina	41 °	Stiff clay	Barn-yard	May 21	Sept. 3	10½ "	Ripe Oct. 15	12 "	1½ "
56. F. A. Fleming	Pa.	Clearfield	41 °	Sandy loam	Hen manure and ashes	June 3	Sept. 14	7½ "	Killed Oct. 20	8 "	1½ "
57. Geo. R. Pelton	Ohio.	Trumbull	41½°	Loam		May 27	Sept. 15		Ripe Oct. 15		
58. J. McRorie	N. Y.	Wayne			Barn-yard	May 13		9 "	Killed Oct. 20	10 "	1 "

Condensed Extracts from letters accompanying the above.

No. 21 (of tabular reports above).—John Frazier, O. "....I planted late, June 14, as an experiment, and the Cane fully matured. This crop has even surpassed the highest expectations of all, so far as I know, and I am daily hearing from nearly every part of the county. Every farmer is trying to secure seed for another year. From the trials here-abouts, the stalks average a pint of juice each, and 6 pints make one of good syrup. An acre will produce about 15,000 stalks, giving full 300 gallons of syrup. The cost of cultivation is about the same as Indian Corn...."

No. 22.—S. M. Berry, Ky. "....I have tried the Sugar Cane; am pleased with it, and believe it will fulfill the expectations formed. Owing to the season, my seed was in the ground 20 days, and only about ¼ came up, weak at first. The syrup made in September was bitter. A second trial, made Oct. 20, after two heavy frosts, produced a much better syrup. Seed appears heavy, sound and good...."

No. 23.—W. Kerr, Ohio. "....Your 3-cent P. O. stamp package, I put on two square rods....Pressed it Oct. 5, with wooden rollers, which took out only part of the juice, but good sized stalks gave a pint each. From the plot I obtained 3 gallons of thick molasses equal to the best Sugar-house syrup...."

No. 24.—Zech. Beesan, Ind. "....I have made 400 gallons of syrup, some of it very good; grained a little.."

No. 25.—S. Williams, N. Y. "....The seed panicles appeared Aug. 24, and by the middle of September the seeds began to be tinged with brown; but though the frost kept off until Oct. 19, they neither filled or ripened more. The largest stalks were 1¼ inch in diameter below the lower joints, and were sweet and remarkably juicy, through their entire length. The main stalks were over 13 feet high. Cows eat them with a *gusto*, when cut in short oblique pieces....As Sorghum affords twice the nutriment of corn grown for soiling, it is very profitable for a forage crop; but I think it can only be profitable for syrup with the aid of a powerful crusher....What are we to do for seed...." Get it from more southern localities.—Ed.

No. 26.—A. S. Whiddan, New-Hampshire. "....Our first frost Sept. 29. A killing frost a few nights later destroyed all hope of maturing seed. I think that had the past Summer furnished the usual amount of *sunshine*, the seed would have been safe, especially so, as a few hills matured last year on the same plot....Our syrup making conveniences were primitive enough—a common sugar crusher which took out perhaps half of the juice; common iron boilers of a cook-stove, with no ceremony save adding a small dessert spoonful of milk of lime to each pailful of juice, thrown in while the juice was boiling....We obtained at the rate of a quart of excellent syrup to a pailful, or say 8 quarts of juice....I should mention that the cane stood out until the middle of October—through several severe frosts...." This is from Stratford County, New-Hampshire, and in latitude 43½°.—Ed.

No. 27.—Hiram Wilson, Canada West, latitude 43°. "....Our seed was planted too thickly—in hills 2 to 2½ feet apart—but the stalks generally attained 1 inch in diameter, some of them 1¼ inches, and 10 to 11 feet in hight. ....Oct. 12, 8 days before anything like a killing frost here, we tried 40 green stalks, by cutting them in pieces, bruising with a mallet, and pressing out the juice as best we could by a very awkward and imperfect process. We obtained 6 quarts of juice, which made 1 quart of good rich syrup. We think it highly probable, if not settled beyond doubt, that with proper cultivation and management, the Chinese Sugar-Cane will thrive *here*, and produce 100 *or more* gallons of good rich syrup per acre. ...." So much for Canada.

No. 28.—John Crapo, Iowa. "....I cut a few canes Oct. 1st, peeled them, put them in a boiler over the stove, and left them with wife to attend to....I was astonished at the amount of good thick molasses quickly obtained. Several who have tested it, say it is a great ways ahead of anything of the kind ever brought here for sale. I have saved all the seed likely to grow, and mean to plant an acre next year....My neighbors all want seed which I cannot spare. I direct them to you...." We shall probably be able to send out to each subscriber desiring it, a much larger qantity of seed than was given last Winter. —Ed.

No. 29.—T. Pomeroy, N. Y. "....I planted on the 29th of May and 4th of June. Sept. 9th, carried six stalks to our county fair and received a premium of $5. Oct. 14th, I cut the cane and laid it upon the ground. Three inches of snow fell upon it but melted away the next day. Oct. 18th, I carried 2,000 stalks 4 miles to a wooden mill and obtained 100 gallons juice, which I boiled down on the 20th and 21st, in iron kettles, to 25 gallons syrup. The syrup is very sweet to the taste, but leaves an unpleasant after taste resembling bitter, which characterizes all the syrup made in this region and will prevent the future planting of the cane unless it can be remedied...." This point is remarked upon elsewhere.—Ed.

No. 30.—S. S. Moser, Ohio. "....My plot, one-eighth of an acre, planted May 25, came up in about a week, and very slender, sickly looking things the plants were. The excessive wet weather washed out nearly half of them above ground. Under the circumstances it took 6 to 8 weeks to get one foot high, but after that you could almost see the growth. When killed by frost, the last of October, the stalks were 10 to 11 feet high, and ¾ to 1¼ inches in diameter. With a rude mill, similar to the one described on page 237, October No., I pressed out juice enough for 10 gallons of very superior syrup, which I could readily sell here at $1 per gallon....A good iron mill would have expressed double the amount of juice from the same quantity of canes.

No. 31.—Enoch Engle, Penn. "....Planted one-tenth acre May 20. This, like Indian corn, grew slowly for a long time. ..Oct. 19, a heavy frost partially killed it; only a part of the seed—about a half bushel—was ripe. Oct. 20, we extracted 20 gallons of juice with a simple set of rollers, and obtained four gallons of good, but rather thin syrup. Fifty selected canes gave 10 quarts of juice, with only about two-thirds of the juice pressed out. Hogs, Horses and Cows, ate the canes greedily...."

No. 33.—L. Eastwood, Lucas Co., Ohio. "....I planted 18 square rods; about one half drowned out, the balance I succeeded in keeping above weeds and water. From this I obtained 16 gallons of syrup. I first made a mill with 6 inch rollers, but with no cogs and it would not draw in the cane. I next got new twelve inch rollers with spurr wheels, and running the canes twice through, pressed out most of the juice....At different trials, 10 selected canes gave 9 pints of juice....I crushed 12 different lot of cane grown in this county, with a variety of culture and soil, grinding it at different stages of maturity and one lot after the stalks were frozen soft. *The riper the canes the better the syrup. The freezing did not hurt the juice....* I boiled in iron, in brass and in tin vessels. The tin boilers made the nicest syrup. I have made a better syrup than I can buy here....I am well pleased with my success,

and *full of faith in the utility of this plant, and believe it will pay in this latitude, even in such seasons as the past has been....*"

No. 34.—J. S. Woodward, Niagara Co., N. Y. "....I planted 120 hills, three feet apart each way, with seed received from you....Oct. 15, cut and pressed it in a mill made of two beech rollers, costing $2, besides two rainy day's work....Obtained from the plot (4 rods of ground) 8 gallons syrup of fine quality, though not quite equal to the best Sugar House...."

No. 35.—F. P. Bissell, Conn. "....I have made some as nice syrup as I ever saw....I am *convinced, beyond a doubt*, that making syrup from Chinese Sugar-Cane will be a profitable business in old Connecticut."

No. 36.—Sam'l S. Thompson, N. J. "....We made sundry experiments at different stages of growth, running the canes through a common cider mill....Our syrup is better than any we have bought for a year....We obtained more juice, with a larger per centage of syrup, from entirely ripe canes, than when the seed was in the dough state....."

No. 37.—S. H. Jenks, Mich. "....Planted package you sent me in 60 hills; got 35 gallons of juice; made 4 gallons of good thick syrup; cut canes Oct. 3.

No. 38.—S. W. Martin, N. Y. "....I cut up 142 canes, pounded them, boiled them, strained out the juice, probably did not get one-half of it, but I got over a gallon of syrup which was awarded a premium at the County Fair. ....My wife used some of the syrup in about a gallon of plum preserves, for which it proves to be very nice....I I shall hardly get any seed unless from three canes I have taken up with the earth adhering, and put them in boxes under shelter...."

No. 39.—T. Cather, Va. "....Planted your letter package on 10 rods; hoed out the weeds twice without plowing....I made ten gallons of excellent syrup or molasses, notwithstanding the cold season and late planting...."

No. 40.—A G. Weed, Iowa. "....Seed planted very late and young plants much injured by grain....Seeds had begun to turn at the time of frost, Sept. 28. I think in ordinary seasons the seed will ripen in Northern Iowa.... I made a small quantity of superior syrup, about Sept. 20...."

No. 41.—Joseph Troth, Iowa. "....Corn planted at the same time (May 10,) mostly rotted in the ground, but the Cane seed nearly all came up and grew slowly at first but in warm weather it grew finely....A frost on Sept 30, nipped the corn, but not the Sugar Cane which is now (Oct. 12,) still growing, and suckers shoot up from the main stalk...."

No. 42.—J. N. Weaver, Tenn. "....I planted in hills 2 feet apart in rows 3½ feet apart.. .Made one gallon of excellent syrup to the square rod.

No. 43.—James Pott, Pa. "....I manufactured 45 gallons of syrup this season from *not over* one-third of an acre, while with my rude machinery, I am satisfied that fully 15 per cent of the saccharine matter remained in the cane....I feel well paid for my labor. The syrup is of a better quality than that purchased at 75 cents to $1 per gallon.

No. 45.—A Foster, Ind. "....A neighbor traveling at the West, "farm-hunting," chancing to pass by Mr. Foster's sugar works, stopped and gleaned some items. Mr, F. planted one acre, and obtained 450 to 500 gallons of syrup, resembling in color and consistency the best New-Orleans molasses, and fully equal to it in quality....Planted on prairie soil. Crushed with wooden rollers which expressed only about ½ of juice. Boiled down to one-fifth in sheet iron pans Saleratus used to neutralize acid...."

No. 46.—J. B. Hungerford, Ohio. "....Planted one ounce of seed on 25 rods of ground....Pressed the cane in a wooden mill and obtained 17 gallons of good palatable molasses, superior to that purchased of grocerymen...." Not room now for your good and full description of Mill. Imphee noted elsewhere.—Ed.

No. 48.—John Dexter, Conn. "....From 225 hills obtained 6 gallons of very superior syrup....Crushed canes with a roller used for pressing leather, which took out only a portion of the juice. Fair sized stalks yielded a pint of juice each... Boiled down 6 or 7 gallons to one.."

No. 49.—J. L. Stevens, Maine. Latitude 44° 22'. "..In a small experiment, obtained a little syrup, very sweet and of *excellent flavor*—wish I had a barrel of it....Add to above table for No. 12. Success to the *Agriculturist*...."

No. 50.—J. Brown, Ind. "....The Sorghum is no humbug. I planted ½ acre, and made 40 gallons of superior molasses....The speculators 'Out West' are already looking very wise and verry happy, in the hope of making a grand speculation out of the African Imphee...." See remarks elsewhere.—Ed.

No. 51.—A. McClelland, Ohio. "....From your package I raised 225 good stalks, and many suckers which I fed out....Raised 1100 good stalks from Washington seed. Cut worms injured it considerably....Pounded and boiled 100 stalks from your seed, and made 3 quarts good molasses..From the 1100 stalks run once through a simple wooden mill, I got 80 gallons juice which made over 11 gallons of as good syrup as I ever bought for $1 12 per gallon.... Plowed my crop once and hoed it three times....One man here will have over 100 gallons of syrup, many others from 12 to 40 gallons....You have my sincere thanks for your labor in introducing the seed so widely among farmers...."

No. 52.—Chas. M. Keep, Michigan. "....With a small wooden mill, too small to be of much value, I obtained 7 pounds of thick syrup from 140 canes.....Left home before finishing the grinding...."

No. 53.—E. W. White, St Lawrence Co., N. Y., latitude 44° 35' "....Sowed on southerly side of woodshed and house, in 3-feet rows, seeds 6 inches apart; found to be too thick; should be in 4-feet rows, and hills 3 feet apart....Seed yielded 1 to 6 stalks each, average about 4 stalks....Season cold and backward up to middle of July....Oct. 1, took 50 stalks, the product of 14 or 15 seeds only; stripped off leaves; cut into pieces of 2 to 4 inches; crushed and pressed in Hickok's Cider Mill (see page 227, Oct. No.); boiled down to ½ gallon thick molasses....Oct. 24, by same process as above, 140 canes gave one gallon of molasses, with probably one half the saccharine matter left in stalks. Both samples of molasses of better quality than that from the South....The leaves eaten greedily by cows increasing the quantity of milk....Oct. 31, a few stalks left standing for seed, averaging 12 feet in hight, one head has now ripe good seed. The seed on the other stalks about half good...." ☞ This is the farthest point north where the seed has been reported to ripen.—Ed.

No. 54.—H. G. Ainsworth, Ill. "....From seed you sent me, planted May 25, as in table, I raised one bushel of seed....Intend to go into its cultivation more extensively another year, as I consider this county well adapted to raising it, and it is also valuable for fodder...."

No. 55.—D. B. Simmons, Ohio. "....Planted ½ acre as above, in hills 3½ feet each way, 6 to 10 seeds in a hill. Did not remove suckers.. Built a rough mill, but am now (Oct. 29.) cutting canes in a common straw-cutter, boiling the pieces, and condensing the extracted sweet in a copper kettle. I have thus far got one gallon of first-rate syrup from each 12 hills, averaging about 6 stalks each. (About 300 gallons to the acre by this imperfect process!) ....The syrup thus far made is superior to any molasses, or even to Stewart's refined syrup. *There is no humbug about the Chinese Sugar Cane*....Hogs, horses and cattle eat every portion of the cane after the juice is extracted." (Canes pressed, without cutting and boiling, should not be fed to cattle.—Ed.)

Not in Table.—S. N. Cox, of Bartholomew Co., Ind. "..I write this to say that the Chinese Sugar Cane will grow and ripen in Indiana, and that we can hereafter make our own molasses *here*....From less than half an acre we made 75 gallons of thick molasses, superior to the New-Orleans, and I think equal to Maple. My mill was two Oak logs, 15 inches in diameter. It would not work until we put in cogs....We did not extract over two-thirds of the juice. We boiled in common sugar kettles used for making Maple Sugar....From several experiments at different stages of growth, we conclude there is as much syrup and nearly as good, when the seeds are brown as when fully ripe, but the fully ripe canes give syrup of a finer flavor....Removing the heads and blades and letting the canes stand a few days I think gives more and better syrup....We tried it for sugar, but it did not grain very well...."

Roswell Plummer, of Middlesex County, N. J., has made the most careful experiments in this vicinity. We expected a full report, but he now chances to be absent at the South. The following are extracts from his memorandum book: Planted June 2....Sept. 21, 100 selected *green* canes gave 13 gallons juice, yielding 5 quarts of good molasses....Oct. 6, cut 515 lbs. cane; took off leaves and tops, gave 24 gallons of sap....6 square rods gave 2,120 lbs. of cane, yielding 96½ gallons of sap....40 square rods (¼ acre) gave 14,220 lbs. of cane (over 7 tons)....Oct. 12, selected ripest canes and obtained 1 gallon very fine quality molasses to 6 gallons of juice (This was equal to any syrup we ever tasted.—Ed.)....Have tried distillation and obtained one gallon of very fine Spirits from 6 gallons of sap....Nov. 4, cane badly frozen in the field, but we are making *one* gallon of very fine molasses from *four* gallons of sap....The best results obtained by boiling juice immediately on expressing it, and as rapidly as possible. ....Boiling down quickly in shallow pans, with nothing added for cleansing, and strained after condensation through flannel to remove all specks, we obtained very clear, light colored syrup.

DEFERRED REPORTS.

A large number of excellent reports, giving details, came in after the above was made up and stereotyped. Several of them will be given hereafter. Among them we may name: Benjamin Fenn, Jr., Trumbull Co., Ohio, (very complete); B. I. Talbot, Hardin Co., Iowa: H. Williamson, Chester Co., Pa.; John S. Strong, Meigs Co., Ohio; R. T. Ostrander, Walworth Co., Wis., (especially interesting;) Eli Smedley, Lancaster Co., Pa.; Jas. H. Stout, Wheeling, Va.; Jas. C. Kelsey, Linn Co., Iowa; Wm. Chase, Providence Co., R. I.; G. Morse, Claymont, Del.; Wm. G. H., Lancaster Co., Pa.; Wm. H. Bolmar, Rockland Co., N. Y.; Lyman Lawrence, Van Buren Co., Mich.; Wm. Wilton, Alleghany City, Pa.; Geo. L. Squire, Knox Co., Ill., &c., &c., &c. Hundreds of other reports are made, but it will be impossible to refer to all. Messrs. Fenn and Ostrander give favorable results upon making sugar. Another article, in the Jan. No., will give the more important particulars in the deferred reports.

FOR THE BOYS AND GIRLS ONLY.

Work For Winter Evenings.

By *work* we mean employment, and to use a thought suggested by another person, it is work which will become *play* to those who take an interest in it, just as play becomes work, and hard work too, if we don't feel in the mood of it.

The work we have to suggest will be new to a great many of our readers, though not to all of them. We want to get at least one person, in every family where the *Agriculturist* is taken, to *edit a newspaper*. We want to have a *Home Journal* started in every household. Who applies for a situation? Who is ready to entertain the plan.

We have no personal ends to advance; we don't propose to open an exchange list, and ask for a copy of every paper published according to our suggestion, but we are in earnest in our recommendation, and hope it will be followed by a great many.

"A newspaper in every family! a *printed* newspaper!" No, a written one. We think that there are things happening every day which may be treasured up very successfully by those who are on the look-out for news, and which in the course of a week will fill several columns and be quite entertaining to all who are allowed to read the record. The thing has been done, and we shall try to tell how others may do the same thing again.

First, an editor is wanted; an enterprizing lad, or a girl of ready mind, who is willing to take all the trouble, and do all the work if necessary. [The rest of our article is confidential, and addressed to the editors alone.]

We advise you first to issue a *Prospectus*, informing the family that you intend to publish a weekly paper, to be called "The Home Journal," "Our Paper," or whatever else you please to name it; and to be issued every Saturday evening, just after supper; and inviting all who wish, to send you communications and advertisements. Then proceed to prepare the first number. Each one must decide for himself, about the size of the paper he can afford to publish. We recommend as the *best* size and shape, a half sheet of foolscap paper folded once; a small sized *letter* sheet answers very well; *note* paper is too narrow. Papers of this size are easily kept without folding; they are easily read, and when an *enlargment* is demanded, or an "extra" is called for, it is a very simple matter to stitch two sheets together, either one within the other, or back to back. Let the name be written or printed in a bold hand across the first page with the motto, and the register number; thus:

OUR HOME JOURNAL.

Designed to interest and Profit the Family.

A. B. C., Editor and Proprietor. { "Tall oaks from little acorns grow." } Published every week, at home.

Vol. I. No. I.

Draw a line under ths title, and another line perpendicularly through the middle of each page. The next thing is to secure the reading matter which should be wholly original, and which in most cases the editor himself will have to write. It will do him no harm if like Franklin, he has every kind of work to do. But he need never lack topics. He may enlarge upon any subject he pleases, and offer his criticisms with perfect independence. He may record all the news of the week, remembering that people like best to read about the things they are most familiar with. He can give personal items respecting all the members of the family; and if his paper appears well, very likely by Christmas day he will have some new books to "notice." A very nice pleasant seat that editor's chair will be. Some planning will be requisite to "make up" the paper, and get every article into its proper limits; and to get all the *pictures* original or selected, well arranged. The editor will have numerous confidential talks with different members of the family, and at certain hours through the week will be mysteriously busy in his private "office." But no one will

know exactly what is to appear, till the carrier delivers the paper at the appointed hour. And then the interest felt, as one after another takes it up, and passes his comments on it, or expresses his surprise at some important announcement!

This is a great deal better than what is called "composition writing," and gives the writer practice in describing the occurrences of every day life. It is better than "keeping a journal," because it allows greater variety, with less stiffness. And as a matter of family history, we know nothing to equal it. A plan like this pursued for years, even with occasional interruptions, will give one a file of documents which will be worth their weight in silver, as time rolls on.

For the encouragement of beginners, we will only add that years ago a lad whom we knew pursued the plan here described, and not only conferred great pleasure on others but derived personal advantage from it. We are not at liberty to mention his name, but we know that he "holds the pen of a ready writer," and bids fair to exert a wide influence as an editor of papers more widely circulated than those he prepared so long ago. On the other hand, a school boy whom we know, has just brought in *his* paper for Oct. 24, which discusses among other things "the weather," "boat-building," "school items," and the sermons he heard on Sunday. And to show what he thinks of the plan, and how successful he is, we copy two of his articles; a thing he had no idea of when he wrote them.

From "Our Home Journal," of Oct. 24

REFLECTIONS!

Yes, 'tis time, this is the sixteenth number of my paper. I never thought it would last so long and give me so much pleasure. The first number was written one afternoon soon after I came here: I felt very homesick and wanted something to do. Little did I think what would follow less do I think that I ever repented the writing of that first copy or the consequences which you see every week.

From the Same.

TUBE ROSE.

It has flowered! Seven beautiful white blossoms are on its stalk; one has just been picked; two bid fair to open to-morrow and two the day after. No flower ever gave me so much pleasure as this tube rose. I never had one before, in fact, never saw one. I have watched it with great care and I feel fully repaid. Oh! how sweet it is! Many, many thanks, to Miss. H.

See Here Boys and Girls—all of You!

We do not offer any special premiums to grown up people—we can not afford it without giving them a poorer paper. But we have just concluded, for once, to make a special offer to the Boys and Girls, even if we lose a little money by it the first year.

We have on our table a great copy of Webster's Unabridged Dictionary—as large as a large Family Bible, and containing nearly 1,400 pages. This book we could not do without, it contains so much information about almost every word in the English language It cost—we do not remember how much—but we can buy some of them now at $5 each, and we wish every boy and girl in the country had one. This is a great sum for a boy or girl to raise for even so great a treasure. But you can *earn* one. Suppose you start out with a copy of the *Agriculturist*, and show it to the people in your neighborhood, and ask every one to subscribe to a club of ten or more, at 80 cents each. Get all you can in your own place, and if your number is not made up, then go over into some other neighborhood where you are acquainted, and if necessary, write to your uncles or acquaintances, and tell them what you know about the *Agriculturist*, and ask them to send you their names. (The papers need not all go to one or two Post-Offices.) If you do this, and get 40 names, and send them to us with 80 cents each, we will buy a new copy of this large Dictionary and send it to your house with expense—no matter where you live—and with your name written in it. If any of the subscribers you get, think the paper is worth a dollar to them, and they are willing to pay you that much, you can keep all over the 80 cents apiece.

Let us tell you also, that if you try this plan you will get more than the Dictionary—you will get business experience, and learn the art of persuasion, which is of great practical use to every one.

Who will get the Big Dictionary? How many must we send to Mr. Merriam for? Shall we write to him to print an extra edition, right off?

The Problems.

We have received nearly a peck measure full of letters containing replies from Boys and Girls, to former problems, and have a number of fine engravings to present, but the Index, Title page, and other matters necessary to the closing number of the volume have left us no room. We shall, in future numbers, have a whole page at least, of matter specially interesting to our younger readers.

A Special Favor Asked.

It will be a matter of special convenience if our readers will renew their subscriptions for the coming year, and send in new names, as early this month as possible, since, at the best, we shall be overrun with work for a few days towards the close of this month, and the fore part of the next. Farther, the clerks begin correcting the lists and writing wrappers for the next month, as soon as the number of the preceding month is mailed. It will be no more trouble to sit down and write your name, Post Office, County and State, (all that is necessary,) and enclose the subscription, when you read this item, than it will be to do it at Christmas or New-Years. Please oblige us in the above matter, and we too, may, perhaps, have a holiday at New-Years, which will be a novelty to us. Last New-Years our respite consisted in helping to open 563 letters, to prevent their crowding upon a larger number the next day.

All for Eighty Cents!!!

We ask attention to the last two pages of this number, containing a summary of the contents of this volume. The Prospectus promised five hundred articles in a volume—the Index *contains over one thousand* references, though, of course, many of them relate to short answers, &c., but all give information.

So much for the past volume. The next volume will be ONE THIRD LARGER, or allowing the same space for advertisements, market reports, and such like matters, the *reading matter* of the next volume will be nearly or quite DOUBLED.

The character of the matter will be correspondingly improved.

The number of useful, *instructive*, and pleasing engravings will be very greatly increased; indeed, we intend to furnish from *two hundred and fifty, to three hundred illustrations*, if not more, in the next volume alone.

Now, with all the above improvements, and others not enumerated, the entire Volume, (XVII.,) will furnished to subscribers for EIGHTY CENTS each, *where ten or more copies are taken by one person or by a Club.*

Or, *Six Copies for Five Dollars.*

Or, *One Copy for One Dollar.*

Will not this be a paying investment, to say nothing of the seeds offered free to all subscribers for 1858?

Remember, also, two extra copies (this and the preceding) to all *new* subscribers desiring them.

We make the above promises and offers only after sufficient experience to know that we can certainly fulfill them.

We can do *more* if every present subscriber renews, and brings along as many friends and neighbors as possible. Will not this be done? We think it will.

3,078,792 "ems."

The piece of type metal upon which the letter *m* stands is nearly square, and printers estimate their work by the number of thousands of m's (or ems) which would stand in the space occupied by the type set up. Thus, it would take 1,150 ems to fill the space occupied by this item. Including the smaller letters and the spaces between words, there is more than twice as many letters on a page as the estimated number of ems. On a page of this type (*Nonpareil*) there are about 10,500 ems. On a page of *Brevier* type, like the middle pages of this paper, there are 6,600 ems of *reading* matter. In *Bourgeois* type, like the first page, there, are 5,700 ems. In *Agate* type, like the next page, there are 15,000 ems. It will be seen then, that the number of ems indicates the amount of reading matter.... We have just taken down from our shelves six of the best books we have, which are sold at a dollar each and are *worth* the money—and on measuring the pages we find the books average 444,000 ems each. The November number of the *Agriculturist* contains 252,566 ems. As that number is a fair sample of the future numbers, the measurement shows that estimating only twelve numbers, the next volume will contain **3,078,792** ems, or about the same reading matter as **seven** *good books costing* **$1** *each.* This does not include the two extra numbers given to all *new* subscribers.... We leave our readers to say how the *Agriculturist* compares with most books offered to the public, as respects the quality of paper printed upon, the number and value of engravings, and especially in a careful preparation of the reading matter.

Everybody an "Agent."

Many publishers offer Premiums to persons acting as agents. We follow the same course, only we consider everybody an agent and pay two premiums to *every* one, viz.: Premium *first*, the best possible paper that can be afforded at the subscription price; and Premium *second*, three packages of seed to every one. We therefore "by these presents," as the lawyers say, do hereby constitute and appoint every present and future *reader* of this paper as a special authorized agent to forward the interests of the *Agriculturist*, in his or her neighborhood.

We now consider the work intrusted to good hands and shall rest assured that it will be *well* done.

THE BAKER'S DOZEN OFFER

Will be continued through this year; that is, every *new* subscriber for 1858, desiring them, will be furnished with this and the preceding number without charge.

How to Mail Postage Stamps and Gold.

We have received thousands of stamps which were badly injured or spoiled by being stuck to one another, or to the enclosing letter. It is always better to fold up stamps with a double thickness of thin paper between the gum surfaces. Then, in case of getting damp, they can be separated, and the paper adhering to each sticking surfaces can be removed. If only one thickness of paper be put between, both pasted portions may stick to this, in which case they cannot be separated without injury. Never let the gummed side of stamps come in contact with the printed side, as ten to one, the figures will be defaced and the stamps rendered useless.

To mail gold, a good plan is to take a card or bit of pasteboard and split it open in the middle, drop in the gold coin, and close it with a wafer or paste, then enclose the card or pasteboard and seal the letter tightly.

It is seldom safe to trust money to the sealing or closing of ordinary "self-sealing envelopes." A little extra paste, or a split wafer put in beyond the usual seal will render a letter difficult to be opened. If you know your postmaster to be honest this is enough; if you do not know this fact, then "register" the letter.

Bank Bills.

The bills on most unbroken banks of the country are now passably good here, or approaching that point. For our use *here*, bills on the unbroken Banks of New-York, New-Jersey and New-England, are much the most desirable, but when these, or 3-cent stamps, or gold can not be forwarded, please send along the best bills you have, on Banks in good credit at home. The following table of the discount necessary to be paid before bills can be used here, will give some idea of their *present* value to us—but the rates are growing better almost daily.

Banks in	Discount.	Banks in	Discount.
New-York State	¼	O., Ind., Ky., Mo.	2½@2
New-England	¼	West-Jersey	3
East-Jersey	¼	Baltimore	3½@4
Canada	1½@2	Interior Penn	3¼@4
Philadelphia	2½@2¼	Rhode-Island	4½
Delaware	2½@2½	Interior Maryland	4@5
		South and West	5@7
		Ill. and Wis.	7@8

Two Pieces of Paper—Three Suggestions.

1. Mr. Oren O. Stewart, of Union, Conn., well suggests that "each subscriber when renewing should send along a contribution to the general stock of knowledge, such as: the best mode of cultivating a particular crop, a good recipe, the result, whether good or bad, of the trial of a costly or dangerous recipe on experiment." The whole aim of the *Agriculturist* is to collect and disseminate useful information. One valuable hint from you, reader, if published in these pages, will reach thirty to fifty thousand persons direct, and perhaps a million others by being copied into other journals. How much good you may thus do by a few lines!

2. Please write on but one side of a sheet, and let all business matters be on one page or sheet, and other items on a separate one, putting your name and address on both.

3. It is always better to name *at the beginning* of a money letter, just how much money is enclosed, and follow directly with a statement of what it is for.

Postage only Six Cents a Year.

The law expressly says that the postage on *periodicals* weighing not over *three ounces* shall be one cent per number, and only half that sum when paid quarterly in advance by the subscriber. The papers are to be weighed *dry, and without the wrappers used in mailing.* We shall take care to have each number just below three ounces, so that only one cent per number, or 1¼ cents per quarter, or 6 cents per year can be charged for postage.

Back Numbers of Vol. XVI.

We shall be able to supply from our stereotype plates, all the back numbers of this volume, that may be wanted. The entire volume will be supplied in numbers, at the office, for $1, or sent post-paid for $1 12.

To new subscribers who have the November and December numbers as a premium, the *ten* preceding numbers will be furnished for 84 cents at the office, or sent post-paid for 94 cents.

Volumes XII, XIII, XIV and XVI, (not XV,) will be supplied neatly bound for $1 50 each. *They are too bulky to go by mail.*

Ready prepared covers for these volumes can be had for 25 cents each. The numbers can be put in by any book binder for 25 or 37 cents per volume. *The covers are not mailable.*

The Seeds to be Distributed.

We are aware it would be for our interest, could we at this time, announce the list of seeds for the next Annual Distribution, but it is impossible to do so, before the next number, as we are making constant additions. Had we not yielded to the anxieties or fears of subscribers last year, but delayed the distribution of Sugar Cane Seed until March, each of the first 10,000 packages would have been twice as large. The whole distribution this year will be completed in ample time for the Spring planting. We hope to effect such arrangements with the various Express Companies, as to send out seeds cheaper by Express than by mail, to most points where there are ten or more subsbribers.

MARKET REVIEW, WEATHER NOTES, &c.

AMERICAN AGRICULTURIST OFFICE,
NEW-YORK, Nov. 25, 1857.

There has been a partial revival of activity in most branches of business during the past month. The pressure for money has not been so severe, and merchants have operated with more confidence. The General Produce Markets have been most signally affected by this improvement in financial affairs. The great leading agricultural products have been sent forward to market, and sold with more freedom. There has evidently been an increased disposition among parties having supplies to dispose of, to sell at prevailing rates rather than to hold on in anticipation of being enabled to secure higher prices at some future period. The receipts from the interior have been quite extensive, and as they have met with prompt purchasers, there has been very little accumulation here. The demand has been generally active, as well for export as for home use, though recently the unfavorable news received from Europe, has lessened the inquiry, so that buyers are now purchasing such lots as they immediately require, having no encouragement to extend their operations. This is especially the case with shippers, and unless a change for the better should occur in the markets of the Old World, or prices fall to a lower average here, there is not much probability of a heavy export trade for some time to come. . . Our financial crisis is now a matter of history; while Europeans are just experiencing very severe embarrassments, which will keep them from entering into any new engagements that they can easily avoid. The abundant crops in the Old World, as well as in our own country, this year, have given an ample supply of cheap food; and if we cannot afford to sell our produce at such low rates as will exclude all competition, we need not look for much of a demand from Europe. . . . As for Cotton, it is but sparingly sought after, even by our own spinners, and prices are wholly unsettled. The last sales effected here were at 12c. for Middling Upland, 12½c. for Middling New Orleans, and proportionate cash prices for other grades, but large lots cannot be disposed of at these quotations. Our available supply is very light, especially of ordinary and middling; but factors are quite willing sellers when they find customers . . . . The Provision trade has been quite tame. The supplies received from the interior have been moderate, but as the demand from the trade, as well as for shipment, has been limited, prices have been unsteady. . . . In other branches of business, there has been no very remarkable change—The following carefully prepared list of prices, will show the difference between the quotations given in our last, and the closing prices, to-day:

	Oct. 22.		Nov. 25.	
FLOUR—Com'n to Extra State	$4 60	@ 5 20	$4 75	@ 5 20
Common to Fancy Western	4 60	@ 5 10	4 75	@ 5 25
Extra Western	5 40	@ 5 50	5 00	@ 5 60
Fancy to Extra Genesee	5 20	@ 7 50	5 25	@ 7 75
Mixed to Extra Southern	5 40	@ 7 50	5 20	@ 7 50
RYE FLOUR—Fine and Super.	3 50	@ 4 62½	3 50	@ 4 60
CORN MEAL	3 25	@ 3 75	3 50	@ 3 75
WHEAT—Canada White	1 25	@ 1 35	1 17½	@ 1 30
Western White	1 15	@ 1 42	1 15	@ 1 50
Southern White	1 25	@ 1 43	1 22½	@ 1 52
All kinds of Red	1 03	@ 1 27	1 95	@ 1 32
CORN—Mixed	71	@ 72	80	@
Yellow	Nominal		85	@
White	Nominal		88	@ 90
OATS—Western	48	@ 50	46	@ 48
State	46	@ 48	43	@ 46
Southern &c	33	@ 40	36	@ 40
RYE	78	@ 80	78	@ 79
BARLEY	75	@ 87½	70	@ 86
White Beans	1 62½	@ 1 75	1 55	@ 1 65
Black-eyed Peas, per 2 bush	3 50	@	2 75	@
HAY, in bales, per 100 lbs	45	@ 70	50	@ 75
COTTON—Middlings, per lb	Nominal		Nominal	
Fair	Nominal		Nominal	
RICE, per 100 lbs	3 00	@ 4 25	2 75	@ 3 50
HOPS, per lb	6	@ 9	5	@ 8
PORK—Mess, per bbl	21 00	@21 50	19 00	@19 25
Prime, per bbl	17 00	@	16 75	@
BEEF—Repacked Mess	13 00	@14 00	13 50	@
County mess	12 50	@13 00	9 25	@10 50
" prime	9 50	@10 00	6 00	@ 7 00
HOGS, Dressed, per lb	6¾	@ 7¾	6½	@ 7½
Lard, in bbls. per lb	12	@ 14	11	@ 13
BUTTER—Western, per lb	14	@ 18	12	@ 17
State, per lb	16	@ 24	15	@ 25
CHEESE, per lb	6	@ 8½	6¼	@ 8½
FEATHERS, Live Geese per lb	44	@ 48	40	@ 44
SEED—Clover, per lb	11	@ 12	10	@
Timothy, mowed, per bushel	Nominal		2 00	@
Timothy, reaped, per bushel	Nominal		2 50	@
SUGAR, Brown, per lb	6	@ 9	4¼	@ 8¾
MOLASSES, New-Orleans, prgl	40	@ 50	37½	@ 40
COFFEE, Rio, per lb	10¾	@ 11¾	9¼	@ 11
Hyson Teas, per lb	40	@ 70	53	@ 55
CongouTeas	32	@ 55	30	@ 45
TOBACCO—Kentucky, &c. pr lb	9	@ 20	7½	@ 18
Seed Leaf, per lb	13	@ 35	13	@ 35
WOOL—Domestic fleece, per lb.	Nominal		27	@ 45
Domestic, pulled, per lb	Nominal		29	@ 31
HEMP—Undr'd Amer'n pr ton	Nominal		Nominal	
Dressed American, per ton	Nominal		Nominal	
TALLOW, per lb	8	@ 9	9¾	@ 10
OIL CAKE, per ton	30 00	@35 00	26 00	@42 00
POTATOES—Junes, per bbl	1 87	@ 2 00	2 25	@ 2 37
Dykeman, per bbl	2 25	@ 2 75	Nominal	
Carters, per bbl			2 50	@ 3 00
Nova Scotias, per bushel			85	@ 90
Sweet, Del., per bbl			3 25	@ 4 00
Mercers, per bbl	2 50	@ 3 00	2 25	@ 3 00
Sweet, Va., per bbl	2 00	@ 3 00	2 00	@ 2 50
ONIONS—Red, per bbl		@ 1 25	1 25	@ 1 50
White and yellow, per bbl	1 50	@ 1 75	1 25	@ 1 75
CRANBERRIES—Per bbl	6 00	@10 00	5 00	@ 7 50
QUINCES, per bbl	4 00	@ 4 50	2 00	@ 4 50
APPLES—Common, per bbl		@ 1 50	2 00	@ 3 00
Spitzenburgs, per bbl			3 25	@ 3 50
Newtown Pippins per bbl			3 50	@ 4 00
Greenings, per bbl			2 50	@ 3 00
Fall Pippins, per bbl	2 50	@ 3 00	3 00	@ 3 50
PEARS—Common, per bbl	1 50	@ 3 00	Nominal	
TURNIPS—Ruta bagas, per bbl	76	@ 1 00	75	@
PUMPKINS—Per 100	4 00	@10 00	Nominal	
SQUASHES—Marrow, per bbl	1 25	@ 1 50	1 75	@ 2 00
CABBAGES—Per 100	1 25	@ 3 50	3 00	@ 4 00
CAULIFLOWER—Per dozen	50	@ 75	75	@ 1 25
CELERY—Per dozen	87	@ 1 00	75	@ 1 00
POULTRY—Fowls, per pair	88	@ 1 00	75	@ 88
Chickens, per lb	—	@ —	10	@ 12
Ducks, per pair	75	@ 1 25	75	@ 1 25
Partridge, per pair			63	@ 75
Grouse, per pair			1 50	@
Turkeys, per lb	14	@ 16	12	@ 14
Geese, each	1 00	@ 1 50	1 00	@ 1 50
PIGS—Roasters	1 25	@ 2 00	1 25	@ 2 00
VENISON—Carcass, per lb			11	@ 12

We annex a statement of the total receipts of the leading kinds of Breadstuffs, by railroad, river and coastwise, and of the total sales, here, for five weeks, ending to-day:

	Receipts.	Sales.
Wheat-flour, bbls	521,000	493,362
Wheat, busn	1,803 375	1,799,125
Corn	360,943	666,250
Rye	13 375	23,375
Barley	33 625	84,375
Oats	107,332	

This statement affords the following comparison of the total receipts, in each of the last two months:

	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
24 bus. days last mon.	387,000	719,000	371,000	5,300	68,600	76,500
30 bus. days this mon	521,000	1,803,375	360,943	13,375	33,625	107,332

It also enables us to give the following comparison of the total sales in each of the last two months:

	Flour.	Wheat.	Corn.	Rye.	Barley
24 business days last month,	281,800	1,037,700	679,560	17,700	16,000
30 business days this month,	493,362	1,799,125	666,250	23,375	84,375

We add a comparison of the Receipts and Sales, here, for the *five weeks* ending Nov. 25, in each of the last two years:

	1856.		1857.	
	Receipts.	Sales.	Receipts.	Sales.
Flour, bbls	662,250	435,045	521,000	493,362
Wheat, bush	2,848,000	2,653,400	1,803,375	1,799,125
Corn, bush	1,144,000	1,160,500	360,943	666,250
Rye, bush	32,750	119,900	13,375	23,375
Barley, bush	83,500	57,750	33,625	84,375
Oats, bush	109,000	——	107,332	——

Milwaukee Flour and Wheat Shipments during each of the last two seasons to Nov. 1.

	1856.	1857.
Flour, bbls	126,457	177,574
Wheat, bush	2,166,649	2,163,715

A sufficient number of cargoes are now on board at Milwaukee to carry the shipments of Wheat beyond those of last year to the same date.

Buffalo Breadstuffs Receipts by Lake from the opening of Navigation to Nov. 1, *in each of the last three years.*

	1855.	1856.	1857.
Flour, bbls	690,443	900,691	551,956
Wheat, bush	5,077,268	5,750,268	5,473,617
Corn, bush	8,377,030	8,730,894	5,524,656
Oats, bush	2,238 684	1,601,643	993,505

Buffalo Breadstuffs Shipments during October, 1857.

Flour bbls	25,221	Corn, bush	365,911
Wheat, bush	1,741,732	Oats, bush	171,683

Oswego Breadstuff Receipts from the opening of Lake Navigation to Nov. 1.

	1855.	1856.	1857.
Flour, bbls	196,141	144,902	77,344
Wheat, bush	4,228 749	6,585,400	3,911,404
Corn, bush	2,797,370	3,423,788	1,962,812

LIVE STOCK MARKETS.—Receipts of Beeves for the four weeks ending Nov. 18, were 12,773 against 13,996 for the preceding four weeks. But these are more than sufficient for the demand during the present time, while the rich are curtailing their expenses, and the poor are not able to buy meat. Receipts for the weeks ending Oct. 28, were 2,981; Nov. 4, 3,433; Nov. 11, 3,978; Nov. 18, 2,381. Prices varied as follows: Oct. 28, no change; Nov. 4, ¾c. lower; Nov. 11, ½c. lower; Nov. 18, 1c. higher—making a decline of ½c. during the month. The latest sales range: Premium Cattle, 10½@11c.; First quality, 9¾@10¼c.; Medium quality, 8½@9c.; Poor quality, 7¾@7c.; Poorest quality, 6¾@7c; General Selling Prices, 8@10c.; Average Selling Prices, 8¼@8½c. These prices are for the estimated net weight of the meat, which is ordinarily about one-half the live weight. Very fat animals dress 55 to 60 lbs. beef to the 100 lbs. live weight.

Sheep and Lambs.—The receipts of the five weeks reported last month should have been 58,537. The footings for the four past weeks give 43,794. Prices have declined during the month. Sheep are now worth 3¾@4c. per lb. live weight. Lambs bring ¾@¾c. more. The trade is dull at the present time, with free arrivals.

Swine are in good supply at 6@6¼c. gross weight for corn-fed, and 5@5¼c. for distillery hogs.

THE WEATHER during the latter part of October was wet. In November a fine moderately cool atmosphere prevailed until near the middle of the month, when the first *heavy* frosts occurred, since which time it has been quite cool, with a light sprinkling of snow. . . . Our condensed notes read: Oct. 23, cool, frosty morning, day cloudy; 24, mild; 25 to 27, heavy wind and North-east rain storm; 28 and 29, cloudy; 30, clear and mild; 31, rain; Nov. 1 to 4, clear and fine; 5, clear a. m., rain at night: 6 and 7, fine and mild; 8, cloudy and light rain; 9, clear and pleasant; 10, raining a. m., clear p. m.; 11, clear and fine; 12, hard frost, mercury 32° at sunrise; 13 and 14, clear and growing cooler; 15, very cool morning, mercury 22°, and ground frozen quite hard; 16, cool a. m., rain p. m.; 17, clear and warm; 18 and 19, mild, cloudy; 20, clear and growing cool; 21, coldest morning of the season; mercury 20°, heavy snows at the West; 22, ground nearly covered with snow, a. m., the first of the season; 23, milder, rain p. m.; 24, cool and pleasant, though considerable cold wind as on several days past.

AN APPEAL

TO FARMERS, MECHANICS, HOUSEKEEPERS AND OTHERS WHO NEED LABOR IN THE STATE OF NEW-YORK AND ELSEWHERE.

NEW-YORK, November, 1857.

Owing to the present severe pecuniary pressure, great numbers of persons in this city, who have been thrown out of employment, are willing to go into any part of the country where occupation can be obtained. As their desire is to earn their subsistence the coming Winter, rather than suffer or be dependent on charity, they would engage for low wages. Among them are persons of almost every age and variety of pursuit. Children of both sexes, young men and women, those with and without families, steady mechanics, reliable laborers, and many sewing women and girls, who would turn their hands to any work for which they might be competent. The persons referred to mostly belong to the respectable industrious classes. They have hitherto been self supporting, and by causes beyond their control are now reduced to the necessity of subsisting on alms, or of finding employment out of this over-crowded city. Nobly preferring the latter, they ask a home, or temporary asylum, in any accessible part of the country where they may earn their daily bread, until the present calamitous times are overpast.

The persons in question having no means for traveling, these must be supplied by those who may require their labor. The cost of the best and cheapest route from the City of New-York to any desired place may be readily ascertained, and the proper sum being sent to the Society applied to, the order will receive immediate attention.

Persons requiring labor will please direct their orders as follows:

For Girls and Women——"Home of the Friendless," Thirtieth street, New-York.

For Children of both Sexes—To N. C, PEARCY, Juvenile Asylum, No. 23 West Thirteenth street, New-York.

For Children and Young Women—To C. L. BRACE, "Children's Aid Society," Astor place, New-York.

For Children, Young Men and Women, Families, Mechanics and Laborers—To N. MEAD, "Five Points Mission," New-York L. M. PEASE, "Five Points House of Industry," New-York.

This circular appeal is the result of conference with the above-named Societies and the Association which the undersigned represents. It is earnestly hoped that the hearts of many may be moved to give it an early and favorable response, and thus afford some little relief to the poor and to this overburdened city. As stern Winter will soon again be upon us, whatever may be done for the benefit of the destitute in this way must be done quickly.

Papers in the interior friendly to the object, will please republish this circular.

R. M. HARTLEY,
Secretary of the Association for Improving the Condition of the Poor, No. 39 Bible House, Astor-place, New-York

American Agriculturist.

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